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Adam Schonewille:

Goals:
Over the next few years I aim to complete a MASc in Mechanical Engineering doing research in Robotics. I hope to one day work as a professional mechanical engineer for a robotics company or run my own robotics company.

Experiences:
Completed an 8 month co-op work term in Germany doing research in Additive Manufacturing with UV Lasers. Here I was able to explore and carry out my own experiments and as a result earned co-authorship on two peer-reviewed publications. At my most recent co-op at NORAM I gained extensive mechanical design experience in designing and building prototype electrochemical cells. I have also designed and build my own 3D printer.

Interests: Robotics, Mechatronics, Mechanical Engineering, Machine Learning.
Hiking, soccer, mountain biking, and lacrosse.

Little Known Fact:
The mitochondria is the powerhouse of the cell.

Akshiv Bansal:

Goals: To work on interesting projects with interesting people. More specifically to be involved in the sustainable technology transition globally, the race to the cost bottom in space industry, or going from primary research to industrial application.

Experience: I spent my co-op terms working at HydroRun(now defunct) and General Fusion, both companies are doing work in novel forms of renewable energy. My projects included designing a ultrafast (<1ms) shutter system, mechanical design of parts for ultra high vacuum, and various electromechanical projects. Additionally I worked as a systems engineer at Avigilon, optimizing hardware/software interactions.

At UBC, I was Fizz president last year, I used to be a co-captain of UBC Solar, and I have been involved in various environmental initiatives including AMS Sustainability, Common Energy UBC, and most recently Student Energy.

Interests: Sustainability, space, emerging technologies, renewable energy, electromechanical engineering, hiking/camping, urban space design, politics

Little Known Fact : I am very interested in electoral systems, and am happy to chat on the pro/cons of MPP, FPTP, IRV, gerrymandering, packing/cracking, VRB etc.

Ian Thompson:

Goals: Create impactful research that changes the way we understand and treat the human body. Develop new techniques and devices to increase the efficacy of health care while reducing costs.

Experience: Over two co-op terms at the BC Cancer Research Centre, I have led the first steps on four different biomedical device projects. In my first term, I prototyped a microfluidic system for producing the radiolabeled antibodies needed to research novel PET-CT methods. In my second term, supported by BC's top undergraduate cancer research studentship, I built optical devices for light-based cancer imaging.

At UBC, I have been involved in mentoring younger students through the engineering physics Mentorship program and as a Teaching Assistant for the first year Introduction to Engineering.

Interests: Biophotonics, biomedical devices, low-resource medicine, comedy (improv, stand-up, and sketch), skiing, camping.

Little Known Fact: I have performed in the Vancouver International Improv Festival and the Just For Laughs: Northwest Festival.

Alex Kyriazis:

Goals: My long term goals are to develop profound new technologies that will disrupt entire industries. I aspire to live an entrepreneurial life. Getting a PhD along the way is also on the bucket list.

Experiences: During my undergraduate career I have explored a broad range of interesting topics. I've worked as a software developer developing health and behaviour applications at Ayogo Health in Vancouver. I have spent 8 months researching practical implementations of Thermo-electronic power conversion at the Max Planck Institute for Solid State Physics in Stuttgart, Germany. At UBC I have assisted concussion neuropathologists by developing automated machine learning image analysis algorithms to identify microglial cell behaviour in white matter tissue. Last summer, I worked on a robotics and AI R&D team at Amazon in Seattle where I will be starting full time work this summer.

Interests: New technologies, robotics, programming, machine learning, AI, devices, musical composition, ultimate frisbee, shotokan karate.

Little Known Fact: I have competed at the national level in shotokan karate sparring.

Ivan Zinin:

Goals: Work as a lead engineer at a technologically leading engineering firm or run my own company. Also, own a machine shop and garage to work personal projects.

Experience: Coop positions as a software engineer at Corvus Energy, Motion Metrics, and Amazon on a number of projects varying from designing hardware test benches and analyzing point cloud data from stereo cameras to architecting a distributed service in S3 at Amazon Web Services. My previous capstone project consisted of designing and implementing a virtual reality vehicle simulator using the Unity engine for the simulation and actuating a KUKA industrial robotic arm.

Interests: Prototyping, Arduino projects, robotics, designing and playing computer games, cycling and hiking

Little Known Fact: I have a cabinet with 6 drawers full of Lego.

Charles McGrath:

Goals: Work on research and design of medical devices, particular for radiation therapy/cancer treatment. Alternatively, I would love to work in automotive research and design, if the opportunity arises.

Experience : Significant mechanical design experience from my co-ops at Schneider Electric, General Fusion and Seastar Solutions, designing and working on a wide variety of projects and applications ranging from high power bussing solutions to high temperature high pressure sensors. Additionally, I am currently a subteam lead on UBC Formula Electric, where I lead the accumulator (battery enclosure and packaging) subteam.

Interests : Medical physics, biomedical engineering, mechanical design, automotive, sailing.

Littl**e Known Fact:** I won my first sailing regatta because the person who would have won was absent for half of the races.

Alexander Jaffray:

Goals: Working on innovative methods for treatment and detection of diseases, in particular cancer, as well as the development of tools for preclinical and clinical research in a medical setting. Development of a technique using computational fluid models combined with fMRI techniques to better predict possible locations of cancer metastases in the body would be a cool PhD topic.

Experience: Extensive research experience in a particle physics lab as a member of the T2K collaboration, working on simulation and high speed data acquisition with photomultiplier tubes for the Super and Hyper Kamiokande neutrino observatories. Strong medical imaging background, developed and applied for patent detailing high throughput robotic radiobiology system, part of which is our Capstone project.

Interests: Biomedical Engineering, particle physics, machine learning, monte carlo methods, medical imaging, genomics, skiing, climbing, running and cycling.

Little Known Fact: I am a classically trained guitarist through the Royal Conservatory of Music, but please don't ask me to play Wonderwall (because I've never tried to play it!)

Andrew Ho:

Goals: Begin an exciting career developing meaningful technologies and products to better society.

Experience:
- 12 months at Powell Industries building sensors and embedded systems for electrical distribution and protection applications.
- 4 months at Delta-Q Technologies working on hardware for industrial battery chargers.
- Currently working with UBC Formula E to develop firmware for a battery management system.

Interests: Hockey, swimming, skiing

Little Known Fact: Tiramisu is a popular coffee flavored Italian dessert, which literally translates to "pick me up". I have been waiting 5 years for Angela's tiramisu…

Cornell Lee:

Goals: Contribute to the design and deployment of the next generation wireless network. (5G, 6G…)

Experience: Through multiple co-op terms at TELUS, I have developed a strong theoretical / technical background in the telecommunication industry, especially in the Mobile Broadband Network. I am familiar with the architecture of cellular technology (Ex. UMTS and LTE) and have analyzed big data to optimize the performance metrics of TELUS' existing network. Additionally, I also have experience designing the network from the viewpoint of EM / RF propagation. There are three cell sites in BC that were designed by me! :)

Interests: I am normally pretty truthful…but I like to play "hidden role" games where I can either expose or "kill" you. No hard feelings.

Little Known Fact: I have a university named after me. I have also spent ~2000 hours commuting to UBC during my five years of undergrad.

Anne Lim:

Goals: Spend my life making increasingly cool and flashy products.

Experience: Software engineering internships at Facebook, MongoDB, and Redfin, where I worked on projects involving database query engines, computer vision, web/mobile development, and release infrastructure.

Interests: Discrete mathematics <3 Some of my favorite books which has changed the way I think are *Zero to One*, *The Three Body Problem*, *Superforecasting: The Art and Science of Prediction*, and *Le Petit Prince*.

Little Known Fact: I was an extra in the music video for Pop 101 by Marianas Trench. Upon very careful inspection, my hand can be seen among the crowd of hands in the party scene!

Gabriella Xiong:

Goals: Get a master degree in Computer Science, ideally related to machine learning or algorithm design. After master, I want to work in R&D position in machine learning application field.

Experience: I was a research assistant in Laser Zentrum Hannover, that position first exposed me to statistical analysis, and it was then I found out my interests in analysis and programming. I also did a lot of laser machining while working at laser zentrum. For my first Co-op, I worked as a physics demo room student at UBC's physics and astronomy department.

Interests: Interesting Science, Cutting-edge Technologies, Science Fictions, Hiking, Music.

Little Known Fact: I wanted to become a detective when I was younger.

Beichen Zhang:

Goals: I am planning to get a MSc in CPSC or Math after working for 2-3 years. My ultimate goal is to get into industrial R&D and start up my own company when the time is right.

Experience: Software Engineering Internships at Arista Network [4-Month], BlackBerry[4-Month], LMI technologies Ltd[8-month] and Research Assistants in UBC and National Unviersity of Singapore. The coop projects involved:: network routing, software defined network OS, desktop/web/mobile development, embedded system firmware, machine vision and various machine learning topics. During the school and spare time, i have been working on a blockchain related start-up, and robots, quantitative finance related projects.

Interests: Machine Learning,Distributed System,Acoustics,Robots, Economics,Quantitative Finance,Hiking,Skiing,Sanshou

Little Known Facts: Polyphasic sleep could reduced the total sleeping time to 4 hour/day yet keep a decent a level of focus during the emergency time such as the day before ENPH robot competition~

Andy Tu:

Goals: Enable cutting-edge research through software.

Experience: Currently interning at AbCellera on the bioinformatics team as a full-stack developer, building software infrastructure for the data pipeline, as well as a machine learning tool for automated nucleotide sequence curation of antibodies. Previously interned at SAP working on automated FOSS license analysis for large open source projects, in addition to full-stack development of a project management portal. Completed first internship at Global Relay, as a QA Analyst.

Interests: Biomed, Robotics, Machine Learning, Finance. I enjoy programming and working on my own projects, working out, and snowboarding.

Little Known Fact: I have a chinchilla. He doesn't like being touched but I pet him anyways.

Brian Irwin:

Goals: Space colonization, immortality, avoiding the AI apocalypse… you know, the good stuff.

Experience:
- 4 months doing USRA in mathematical immunology at UBC
- 8 months at Tesla Motors doing battery development work
- 4 months at Canalyst building financial software and models

Interests: Autodidactism, AI, Renewable Energy, Embedded Systems, Cyber-security, Economics

Little Known Fact: I once managed a $25,000+ annual budget

Ruishen Lu:

Goals: My short term goal is to become a data scientist with relatively strong background in physics and maths. My long term goal is to start a company specializing in one very specific AI industry to make this world a better place.

Experience:
I've worked at Quantum Technology Corp for 6 months as an Engineering Physics Intern. Quantum mainly provides applications and solutions for industrial gases. My duty was mainly to support project director on system testing, specification research, and performing gas purity experiment. I have also worked on robotics, drone and machine learning projects for several months during the 5 years of study.

Interests:
Data science, machine and statistical learning, AI, car related technology, stock market

Little Known Fact:
I enjoy many different kind of things. I collect model cars and watch car shows all the time. I listen to pure music and play piano for fun occasionally (sometimes for stress relief)..

Bryden Fogelman:

Goals: I feel like a career in product design would suit me best as it's a combination of technical skills mixed in with leadership, design and business skills. The ultimate goal would be to start my own company but I'd like some industry experience under my belt first. Before all this, I'd like to slave away as a software engineer working on projects that are actually important. Hopefully working on computer vision or deep learning but any complex problem that has a non-trivial solution would do.

Experience: My past few co-ops have been software focused. My previous co-op was at Tesla working on the Dimensional Engineering working on internal automation.

Interests: Machine Learning, Data Science, Surfing.

Little Known Fact: I've been a raft guide since I was 14, I'm also partially named after the river I guide on. Ask me about it!

Cyrus Neary:

Goals:To pursue graduate studies in computational engineering. Afterwards, my goal is to work on exciting projects that push the boundaries of modern technology. Through such projects, I hope to be able to make a positive impact on society.

Experience: My first co-op term was spent conducting physics research for D-Wave Systems, the first maker of commercial Quantum Computers. Next, I spent 8 months at MDA Corporation, where I contributed to the development of a novel algorithm to process satellite radar imagery. Finally, I spent 4 months at the Space Robotics branch of MDA in Ontario, where I worked on the simulation and analysis of control algorithms for the European Space Agency's ExoMars 2020 Rover.

Interests: Learning new things, playing video games, playing chess, hiking, and reading novels.

Little Known Fact: My favorite dinosaur is the pachycephalosaurus.

Sam Reid:

Goals: Start a career as a software engineer. Ideally working on a challenging issue whose solution has a meaningful impact on society.

Experience: Three co-op terms performing composites manufacturing simulations

Interests: Snowboarding, mountain biking, hiking, water skiing - essentially anything outside!

Little Known Fact: If you lift a Kangaroo's tail off the ground it can't hop

Doug Matthews:

Goals: Interested in pursuing a career in product management. My short term goal is to improve my software development skills.

Experience: I completed software developer internships at Industry Canada and Navigate Surgical Technologies. The later developed a product that allows for real time 3D rendering of dental implant surgery, providing dentist with a visual surgery guidance system.

I am currently working at CadMakers Inc. part time in their product development team where I will transition to a full time role after graduation.

Interests: VR and 3D Object Algorithms, Machine Learning, Product Development

Little Known Fact: I was born and raised in Jasper National Park in the Canadian Rockies.

Candice Ip:

Goals: I like being involved with technology and it's applications towards sustainable energies, mechatronics, and health. Ideally, I could work in one or the interesection of these areas. I also hope whatever I do will help inspire the newer generations in pursuing science and technology!

Experience: I have experience with image and signal analysis, designing my own optical experiments for determining chemical and biological compositions for two different labs (MPSD in Germany and UVic in Victoria). At the biomedical robotics lab, RREACH, at UBC, I worked on building a mechatronics mattress topper requiring PIC microcontrollers and digital temperature and accelerometer sensors.

Interests: Prototyping/hacking,Energy Technologies, Hiking, Riddles

Little Known Fact: Not so much a little fact, but I've always wanted a dog 🐶

Emma Fajeau:

Goals: Work as a firmware or software engineer.

Experience: Through the co-op program, I have gained a variety of technical work experience. First, I worked on Kardium's software team writing unit and integration tests for a safety-critical cardio-medical device. Later, I worked on Intel's FPGA ASIC emulation team where I wrote firmware and FPGA designs to test our emulation platform. I also worked in Prof. David Jones' lab at UBC on controls projects for AMO physics experiments. This past summer, I completed a USRA in the UBC Math department studying free-boundary minimal surfaces embedded in the unit ball, under Prof. Ailana Fraser. While in school, I have worked as a teaching assistant for an operating systems course and first year physics labs.

Interests: Math, basketball, hiking

Little Known Fact: I have taken a Greyhound from from Montreal to Vancouver.

Becky Lin:

Goals: To continue pursuing study in nano-enabled devices and be able to contribute in incorporating this technology for sustainable societal advancements.

Experience: I worked at BC Children's Hospital Research Institute (4 month) helping neurologists analyze MRI scans to study effect of concussions on brain. After taking a course on Bio-MEMS (micro mechanical electrical systems), I gained interest in nanotechnology. My second coop term was at National institute for Nanotechnology (4 months) working on RF applications for nano-nonlinear molecular electronic devices.

Interests: Nanotechnology (both electronics and photo-electronics, and fabrication!), pottery, skiing, piano, sharing music that I've transcribed

Little Known Fact: It's quite terrifying when you are separated only by a thin tent fabric with a family of raccoons ferociously fighting for a piece of sausage that your friend had accidently left outside. This was when camping on a tiny island near Nanaimo.

Grace Hu:

Goals: Build robots that help humans reach into deeper universe

Experience: Elix Wireless (4 mos); Flypro Aerospace(8 mos); Sierra Wireless(8 mos); ECE quantum simulation(upcoming 4 mos)

Interests: Video Games, swarm robotics, traveling, food.

Little Known Fact: When I was working with Flypro, one of our test drones wandered away and was lost forever into the blue sky

Yuan Tian:

Goals: Working in robotics or artificial intelligence field.

Experience: I've worked in Archiact Interactive for a hexapod rescure robot project for 8 month, and also worked in Sophos, an antivirus software company, for 4 month. I'm going to spend my summer in Sensormotor System Lab under the supervision of Dr. Dinesh Pai for the coming summer.

Interests: Robotics & Artificial Intelligence.

Little Known Fact: I have the Nuclear Energy Worker certificate.

Darren Tong

Goals: One day, I would like to have a currently undiscovered species of Animalia named after me. Discovered by me of course. Preferably some sort of fuzzy shrew-like creature, with a sniffly nose, but I would also settle for discovering a new type of beetle.

Experience: My Low Temperature Physics Research position for the Stuart Blussom Quantum Matter Institute is my favorite technical experience. I worked to design and implement an Adiabatic Nuclear Demagnetization Unit to reach temperatures in the 1-2mK range, with aims to study the super-conductivity of $YbRh_2Si_2$.
I also spent 8 months designing and fabricating lecture demonstrations for the Physics and Astronomy Department here at UBC, honing my inner machinist.

Interests: My strongest interest is in the Philosophy of Mind. How can the mind interact with matter? Recently, I've really been into Prehistoric Civilizations, the ruins they've left behind, and what we can learn from our human past.

Little Known Fact: It was when I understood Evolution by Natural Selection that I saw for the first time that nature could have more than just aesthetic beauty.

Jackson He:

Goals: To do anything I can to help others and leave an impact before I die… :(

Experience:
- Internship with Aspect Biosystems to upgrade and maintain 3D bioprinters, develop a quality control system for the microfluidic printhead devices with a UI application, and software QA.
- Internship at UBC Structures Facility to design hardware and software for graduate students' experiments and upgrade existing linear and multi-axis earthquake simulation tables.
- Internship with the BC Cancer Agency to develop a database of tissue samples from cancer patients.

Interests: Eating, cooking, Netflix, Marvel, building things, memes

Little Known Fact: I can cook savoury food, but my desserts suck.

Gregory Zhang:

Goals: I'm interested in working in industry in computer science, solving problems of an algorithmic nature to create useful products/applications.

Experience: In the past, I have worked at a variety of small companies and research labs, doing work involving cross-language compilation and type checking, HTML tree differencing for regression testing, and solving physics problems via optimization.I have also participated extensively in programming competitions, and am on this year's team from UBC participating in the world finals of the ACM International Collegiate Programming Competition.

Interests: My primary technical interests are in applied algorithms and numerical methods. Recently I've also developed an interest in machine learning and data mining. Outside of school I enjoy listening to music, reading, and board games.

Little Known Fact: I have perfect pitch.

James Park:

Goals: I hope to contribute in the field of networks and distributed systems by improving human-to-human, machine-to-machine, or machine-to-human communication. I also want to provide mentorship to anyone who wants to learn programming because (in my opinion) programming is becoming just as important as reading and writing.

Experience: In 2016, I worked at Fusemail as a Java developer who implemented features to the existing API which provides email protection services. The tasks include query optimization and creating software architecture for versioning API. In 2018, I worked at a start-up as a MacOS developer who contributed 30% of the beta product of Flow (http://createwithflow.com/). During my spare time, I have been creating iOS apps (e.g a podcast app) for at least 3 years.

Currently, my colleagues and I are competing in the Microsoft Imagine Cup with our software application which received a lot of praises at a hackathon (https://goo.gl/9Le4rw). We are currently improving the application by making modification based on users' feedback.

Interests: My technical interests are blockchain, computer network, distributed system, robotics, numerical computation, and mobile development (particularly iOS in Swift because of my love for Apple products). I should learn React Native soon

Outside of my career goals and academic, I love to spend my time with my girlfriend, Noor, by walking/lunging her horse together in Southlands.

Little Known Fact: I **LOVE** sweet potato cheesecake. You can get them at Cafe De l'Orangerie (#Advertisement)

Johnson Liu:

Goals: Explore different types of work, find out what I'm super passionate about (so far it's web development), and be really good at by continuous improvement.

Experience: In 2015 I worked as a co-op engineer for UBC CARIS lab where I worked on software for biomedical devices that helped patients with their rehabilitation after hemiplegia. In 2016 I worked as a bioinformatics software intern at BC Cancer Agency CTAG lab where I developed and test big data/supervised machine learning R package diceR. DiceR has been published to CRAN.

Interests: building web applications using various frameworks such as Ruby on Rails, React. Bioinformatics, machine learning are also my areas of interest. My favourite thing to do other than writing great code is to cook great food.

Little Known Fact: I eat kimchi every single meal even though I'm not Korean.

James Twaites:

Goals: In the next ten years many tasks will be automated and performed by robots, especially unmanned aerial vehicles. I want to design those UAVs, especially to maximize their flexibility of performance and bring design consideration to the way people will perceive and interact with them.

Experience: I've worked on the design of UAV fuselages, power systems and control systems through a sponsored project and an eight-month coop work term with InDro Robotics (based on beautiful Salt Spring Island), as well as on a control system for managing the cables of tethered drones.

Interests: Kayaking, canoeing, science fiction, board games. I love to be outside in this world or inside in another one.

Little Known Fact: I'm working on circumnavigating each of the seven Southern Gulf Islands by kayak. Three down so far!

Nicholas Slakov:

Goals: I'm excited about projects with some tangible social impact, that also allow me to tinker away. Primarily my goals are to spend as much time as I can with the people that matter most.

Experience: I have a significant amount of experience with unmanned vehicles. I worked with InDro Robotics designing UAVs and ASVs. This led into a capstone project for the company where I designed and built a tether submersible for use in habitat assessment and photogrammetry.

Interests: I like mechanical design and prototyping, and math for the sake of itself. Outside the academics, I love games (preferably incomplete information), music, snowboarding and traveling.

Little Known Fact: I have performed improvised theatre on Canada's national stage in Ottawa.

Graham Greig:

Goals: I am currently planning to pursue a Ph.D in nuclear engineering and Plasma Physics with which I hope to assist in the development of nuclear fusion technologies. Barring this I will be looking for meaningful engineering work that aligns with my interests.

Experience: I have had a broad range of experience in Engineering physics. In my first work term, I worked for FP Innovations on simulation of formation and strength properties of oriented strand board. Following this, I have worked for two years at TRIUMF developing ionizing particle detectors for the ATLAS experiment at CERN in Geneva. Here, I developed statistical models to measure the accuracy of robotic automation, built electrical prototype detectors and went to Germany to test detectors in an electron beam.

In my capstone experience I have worked on the development of a prototype remotely operated underwater vehicle for Indro Robotics and a tethered power supply for aerial drones. In these projects I worked extensively on the control theory, and performed much of the mechanical fabrication.

Interests: Particle Physics, Plasma Physics, Renewable Energy, Cell Biology, Robotics, Control Theory, Rock Climbing, Beer Brewing.

Little Known Fact: Before Engineering physics I had to redo much of grade 12 as I almost failed it.

Jory Wong:

Goals: I hope to apply data science towards addressing social and environmental issues that I am passionate about, including sustainable agriculture and youth capacity-building. My short-term goal is to develop my data science skills at a start-up company. Ultimately I would like to work as a project manager/ CTO, playing a key role in the strategic directions of a tech company.

Experiences: I worked in Kenya through Engineers Without Borders, where I developed and implemented a growth strategy for a start-up company that procures high-value feeds for smallholder dairy farmers. The strategy involved partnering with milk traders to gain access to their network of dairy farmers, and thusly expand our sales and marketing channels. I have data science experience from my senior capstone project where I developed a statistical model to extract trends from bank transaction history and forecast future cash flows.

Interests: Rock climbing, photography, gardening, painting

Little Known Fact: I owned and operated my own photography business for 3 years before starting university.

Kevin Chow:

Goals:
I would like to spend my life enjoying creative and productive work which may not always be useful, but will always be fulfilling.

Experience:
I have worked in both the startup world and big business world in Vancouver designing and developing embedded software for companies such as Recon Instruments and Intel. In these positions I've been involved in human gesture tracking, sensor calibration, energy conservation, code security, chip integration, and many others.

Interests:
In my spare time, I like to enjoy a social game of mahjong or meet new people to socialize and experience new things with. In my private life, I'm an avid musician who likes to play the guitar and piano, a dabbling cook who likes to make soups and sauces, and a root beer fan. I also like very nearly completing personal software projects I start.

Little Known Fact:
The UBC Hospital ER closes overnight. I know this because I broke my ankle just outside and after I crawled in they told me to call an ambulance to take me to another hospital.

Wilhelm Gavino:

Goals:
My main goal is to finish my undergraduate studies and pursue a career in systems engineering. Ideally, I would like to accomplish this goal as soon as possible.

Experience:
My first co-op position had me positioned in the Calgary, assisting in the design of the communications systems of light-armoured vehicles. This experience helped me get a co-op position in OSI Maritime Systems, where I assisted in the design of integrated navigation and bridge systems for naval warships.

Interests:
Between classes I would pay a visit to the UBC Mahjong club and play mahjong with other members.

Little Known Fact:
I raised two pet chickens back when I lived in the Philippines in my childhood.

Han Zhang

Goals:
Following graduation, I'll be working in the aerospace and space industry for a year or two while I get a better idea of what I want to do a PhD in. In the far future, I hope to join Canada's astronaut program.

Experience:
I've worked in government, research, and government funded research. Co-op terms were done in Environment Canada, Max Plank Institute for the Structure and Dynamics of Matter, and the (Canadian) National Institute for Nanotechnology. Outside of co-op, I've done research on cloaking technology at the Nanyang Technological University. Currently, I work part time for my previous capstone sponsor, building more units and developing further the highly successful STROBE system for optogenetics research.

Interests:
I love backpacking and travelling and have sought out international research opportunities like the above to be able to see and live a new part of the world while I work. I like to listen to audiobooks and podcasts on various humanities subjects on my commutes and play strategy games and board games with friends.

Little Known Fact:
I was a performer in Vancouver's 2010 Olympics Closing Ceremony

Matt Herunter

Goals
One of my primary goals over the next several years is to begin a challenging and fulfilling career with a focus on modelling physical processes and software hardware integration.

Experience
During my first co-op term, I worked at General Fusion developing postprocessing software for plasma stability analysis. This included an automated routine that removed noise from mechanical vibrations in interferometer data, and a more complicated routine that attempted to extract information about excited modes based on a magnetic field sensor array.

At my current job, I develop new control, safety, and testing algorithms for residential and commercial condensing boilers. I am also developing a multidomain solver in OpenFOAM which solves the fluid, solid, and gas regions in a condensing heat exchanger to assist in the design process. The biggest challenge so far has been modelling the condensation and evaporation mechanisms.

Interests
Hiking, camping, sailing, skiing, climbing, woodworking.

Little Known Fact
I wrote a tool in MATLAB for making instruments out of old glass bottles.

Logan Numerow

Goals
After obtaining a graduate degree (or two) in scientific computing, I'll be looking for a challenging research and development career in the aerospace industry.

Experience
I worked last year at UBC's Advanced Numerical Simulation Laboratory, researching mesh generation techniques for computational fluid dynamics. I developed a novel approach for 3D advancing-layer meshing, and presented a paper at the 23rd AIAA CFD conference in Denver, Colorado.
Currently, I work as a software engineer at UrtheCast, developing an autonomous planning system for imaging satellites! I'm the team's computational mathematician, and I've been responsible for studying optimization algorithms as well as solving geospatial geometry problems.

Interests
I love playing the piano and singing. I recently picked up a harp and I've been teaching myself to play all my favourite songs.
Hiking and rock climbing are also great, and I can't wait to explore the Squamish and Whistler backcountry this summer!

Little Known Fact
At the age of two, I could name all the capital cities and point to any country on the globe. I can't prove it, because my family taped over the recording with a video of our pets...

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Megan Nantel:

Goals: Obtain a PhD in Applied Physics! Continue to learn my entire life and ask meaningful questions. I hope to always be a curious person and I aspire to one day lead my own research group and teach at a university!

Experience: My background has been primarily in optics and photonics. I worked in Germany at the Max Planck Institute to design vacuum compatible pieces for spectroscopy. I found my passion for optics and lasers when I did my second co-op; simulating and designing femtosecond ytterbium fibre amplifiers. With this new found interest, I reached out to another lab at UBC and worked on designing photonic crystal cavities for quantum electrodynamics experiments. I'm amazed by the range of applications of photonics and am excited to continue to pursue this field!

Interests: Hiking, travelling, yoga, education, cooking, eating ice cream :)

Little Known Fact: I'm always down for hiking + sushi (this is probably well known but just in case it wasn't, I wanted to share! :P)

Arjun Venkatesh:

Goals: Work on the moonshots that will help advance the fields of sustainable energy, electric transport, aerospace, or robotics. I would like to eventually lead a technical team as a principal engineer and start my own technology company.

Experience: I have a background mechatronic design with technical interests in controls, PCBA development, power electronics, and systems engineering. My previous work experience as a Battery Safety and R&D Intern at Tesla and a Mechatronics Engineering Intern at Laser Zentrum Hannover (Germany) along with projects ranging from building autonomous robots to competing in Formula SAE have given me the qualifications and hands-on experience required to excel in fast paced, multidisciplinary engineering positions.

Interests: Building things with my hands, trying different blends/methods of brewing coffee, motorsports, skiing, chess, travelling.

Little Known Fact: I was fluent in Hindi, Bengali, and Tamil by the age of three.

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Angela Cheng:

Goals: I hope to contribute to the medical field in a quantifiable way through my work. I also strive to be a role model for young women and encourage more gender diversity in engineering.

Experience: I have experience in both research and industry. Most recently, I was a mechanical engineering intern at Intuitive Surgical where I contributed to the development of a new generation of endoscopes for the da Vinci Surgical System. Last year I worked with BC Cancer to refine a novel imaging phantom for PET-CT verification and calibration. Currently, I am a teaching assistant with the Mechanical Engineering Department for APSC 100 and 101: Introduction to Engineering. I am also the WiSE 2018 (Women in Science and Engineering) mentorship event chair for Women in Engineering at UBC, where I am in charge of planning an evening affair for 150+ female students and professionals.

Interests: My academic interests lie in the Biomedical Engineering space while my social interests involve mentoring and encouraging women to pursue STEM related fields. I enjoy watching movies in my down time.

Little Known Fact: My favourite cake is Tiramisu and I've been told the ones I make are pretty tasty (my mom and Akshiv said so)! My friends have asked me to make them one but I haven't had the time yet! Patience is a virtue.

Rachel Chan:

Goals: I would like to conduct research at the intersection of mathematics and computer science on interesting topics that have quantifiable impact on the betterment of humanity.

Experience: I have worked extensively in the Hoffman Research Group at the University of Toronto on machine learning methods to annotate the human genome. I have also worked with the Gordon Lab at UBC to develop the Sip TRiggered Optogenetic Behavioral Enclosure (STROBE) system for optogenetic experiments on Drosophila (fruit flies). This involved the development of an embedded control system with which to perform real-time signal processing and near-instantaneous activation of lighting upon detecting fly feeding activity. I have worked on an MRI simulation for the effects of diffusion in brain matter with the MRI Research Centre. Finally, I have done research in the field of mathematical modelling of biological phenomena (such as the embryonic development of zebrafish, and most recently, single-cell wounding).

Interests: Mathematics of all kinds, ranging from group theory to numerical methods. I also harbor a growing interest in theoretical computer science topics. In my spare time, I, too, enjoy chilling and waiting for Angela's tiramisu. Sadly it has not yet come.

Little Known Fact: I had a black belt in Taekwondo at some point…

Daniel Kor:

Goals: To live a life that directly impacts a small handful of people, either as an instructor, a biomedical research scientist, or a medical practitioner.

Experience: A co-op term with the Canadian Hydrogen Intensity Mapping Experiment (CHIME), where I contributed to the initial data acquisition pipeline for the largest radio telescope in North America. For a term, I have also worked with the Centre for Hip Health and Mobility to develop a low-cost optical depth sensor for surgical drills. Over the past year, I have been working in the UBC MRI Research Centre, where I develop numerical simulations used to investigate the biophysics of nerve fibres found in the brain, and how it might affect the diagnostics and monitoring of multiple sclerosis in patients. Additionally, I am currently a teaching assistant with the Department of Mechanical Engineering, where I introduce first year students to engineering concepts.

Interests: I am interested in chilling, not doing anything and waiting for Angela's tiramisu. But I have not been able to find time to do any of these things. It is also my aspiration to be more engaged with social work, be it through tutoring programs, or community outreach.

Little Known Fact: I can't say the word 'throw' properly (ask me to find out). Oh, and 'three' is hard to pronounce too. My friends make fun of it and it (sometimes) makes me sad. But it's okay, life isn't that bad, even if times are tough.

Monika Hofmeier:

Goals: My goal is to work in research & development in medical device technology. I'm currently interested in wearable patient monitors and telemedicine.

Experience: I have 5 years experience in health care. Being a former caregiver, I have a unique perspective on how health care professionals and patients view and interact with technology; I believe this will make me a better biomedical engineer. As well, I have a Diploma in Biomedical Engineering from BCIT from which I gained 600+ hours of laboratory experience in electronics, medical device technology, microcontrollers, and software.

Last spring, I worked with a partner and team at Western Clinical Engineering to create a 3D-printed orthopedic cast with embedded muscle, temperature, and flex sensors and an app to display the real-time data. The goal of the project was to investigate a novel way of facilitating better fracture management. We placed in two contests with this device.

Last summer, I spent 9 very busy weeks at Nanyang Polytechnic in Singapore building a wearable stethoscope system for Bluetooth Low Energy. This involved circuit design, soldering, writing firmware, creating an Android app, doing Cloud programming, and 3D printing. The app displays a real-time waveform of a patient's heart sounds and uploads the data to the Cloud for display and analysis.

Interests: Geocaching, 3D printing, gardening, pets

Little Known Fact: I have built interior walls and done drywalling solo.

Runor Agbaire:

Goals:
I would like to work in the energy and/or telecommunication sectors

Experience:
 I have worked as a project engineer in Addax Petroleum Corporation, and Howe Sound Pulp and Paper.

Interests:
Movies, travelling, learning about other languages and cultures

Little Known Fact:
I grew up in Nigeria, Malaysia, Scotland, and Canada.

Scott Fjordbotten:

Goals: I would like to work in either the sustainable energy or transportation industries developing new and impactful technologies.

Experience: I have completed co-ops at Schneider Electric, Kodak, and Kardium. My projects in these positions have ranged from mechanical and software design to image and analyze laser profiles to building manufacturing jigs for biomedical devices. I am currently the Chassis Lead and Chief Engineer at Formula UBC. My projects with the team have ranged from creating mathematical models to analyze the effects of chassis compliance on vehicle dynamics to the development of composite pedals.

Interests: Building and prototyping things, motorsport, snowboarding

Little Known Fact: Through extensive testing, I have found the optimal McDonalds meal is 3 Mcdoubles and a Mcflurry

Matthew Ward:

Goals: I would like to work in either the aerospace or energy industries, working on something exciting like designing spacecraft or nuclear fusion reactors.

Experience: I have completed two research co-ops with the UBC Mechanical Engineering department, with one focusing on non-Newtonian fluid research and the other on graphene research, I also had a co-op with Canfor in an energy management role, performing analyses for potential projects and determining where in the plant new projects should be targeted. I built a tool to translate steam savings into cash savings for the company, based on historical steam production and demand levels as well as limitations on their steam turbine system.

As the current Fizz President, I have coordinated academic and social events for the department, and also sit on the EUS Financial Committee, designing the base budget for 2018/19.

Interests: Aerospace, nuclear fusion, chess, politics

Little Known Fact: I can shred on guitar.

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Shahriar Noroozi Zadeh

Goals: I am very passionate about cutting-edge technology research in Computer Science. Electrical Engineering and Applied Physics. My goal is to get involved with designing and applying state of the art machine learning and computer vision tools to the field of biomedical engineering to introduce innovative solutions for the current healthcare problems. Starting from next year, I will be completing a PhD at Carnegie Mellon University (CMU) working on non-invasive brain-computer interfaces research for patients with neurodegenerative diseases.

Experiences: I have worked as a software engineer at Microsoft Canada on Windows, and spent a summer as an R&D intern at Philips Healthcare in the Netherlands developing an electrical nose sensor for early detection of lung infections. In addition, last summer, as a research assistant at the University of Southern California (USC) in Los Angeles, I worked on applying machine learning to high-throughput genome sequencing. I have also completed an exchange term at ETH Zurich in Switzerland taking advance courses in machine learning and biomedical imaging. For my first capstone I worked on characterizing traumatic brain injury in whole slide imaging using machine learning. My team and I are in the final stage of submitting our work to IEEE Transactions on Biomedical Engineering journal..

Interests: Brain-Computer Interfaces, Medical Imaging, Machine Learning, Computer Vision, Automated Healthcare, Medical Robotics

Little Known Fact: I am a pro at FIFA and almost unbeatable! I travelled to 30 cities in 12 countries last year. I also got to watch the El Clasico at Camp Nou as a Madrid supporter..

Lap-Tak Chu:

Goals: In the next few years, I will be completing a MASc in Electrical and Computer Engineering in micro/nano-robotics with a focus in biomedical applications. I hope to solve interesting healthcare problems in the future, whether as an engineer, consultant or as a researcher.

Experience: I have completed co-ops at Metro Vancouver, TetraGear, UBC CMMT and UBC's Data Science for Social Good program. Some projects I have worked on include utilizing data science methods to analyze transportation networks, firmware/software development on applications such as high-throughput genomics, project management and manufacturing optimization. I have been on UBC Biomedical Engineering Student Team for 4 years working on projects such as a low cost respiratory monitor. Some of my previous capstone and personal projects have included using machine learning to segment white matter tracts from whole slide images of mice brain, predict cognitive health from MRI scans, and wrote software for 3D reconstruction.

Interests: Machine learning/AI, soccer, basketball, skiing/snowboarding, hiking/camping, travelling around the world and finance.

Little Known Fact: I live for cat/doggo memes.

Amir Refaee:

Goals: I will be graduating from Engineering Physics next year and I plan on pursuing graduate school as the next step. I am very interested in Robotics and Computer Vision and I am excited to see what the future holds for these exciting areas.

Experience: My most recent internship was at Intuitive Surgical working on Surgical Robotics that help reduce patient recovery time through minimally invasive surgery. I have also spent a semester abroad at ETH Zurich taking courses in Computer Vision and Machine Learning. Along with my teammates, we have completed both of our capstones dealing with medical imaging modalities including applying machine learning to whole slide brain scans for traumatic brain injury detection and writing a GPU-accelerated inversion algorithm for Photoacoustic Tomography used in breast cancer screening.

Interests: Robotics, Computer Vision, Basketball, Hiking, Video Games, Travelling

Little Known Fact: I used to sleepwalk until I was thirteen years old!

Shaun Won Sug Lee

- **Goals:** Do work related to electric cars in South Korea
- **Experience:** Managed a project on dynamic thermal circuit rating in the R&D at BC Hydro, and did research on photonic crystals at NTT Basic Research Center in Japan,
- **Interest:** Healthy lifestyle
- **Little known fact:** Been on silent meditation retreats

Quinn Ramsay

- **Goals:** To work in communication system engineering and sensor processing. However, am also still considering microtechnology.
- **Experience:** Designed Kalman Filters for Inertial Measurement in Vehicular Applications.
- **Interests:** Research, Coding, Electrical Engineering and Physics, Mountain Biking, Ubuntu, Skiing, Wakeboarding, Music, and Hats
- **Little known fact:** I play Saxophone and am Learning the Piano

Nathaniel Osachoff

- **Goals:** Work in semiconductor design and fabrication.
- **Experience:** Semiconductor layout, Time-Frequency analysis signal processing.
- **Interests:** Linux, open-source software.
- **Little known fact:** I've kept the same facebook profile picture since grade 12.

Johnny Liu

- **Goals:** Work in R&D involving quantum information
- **Experience:** Co-op terms included software development for a small firm, and electrical hardware for Sierra Wireless
- **Interests:** Keeping up with the latest music and movies, competitive video/board games
- **Little known fact:** Top 200 Hearthstone player in North America

Stefan Sander-Green:

Goals:
My career goal is to contribute to sustainability through the development and implementation of renewable energy technology.

Experience:
I have co-op work experience with Quantum Technology Corp where I worked on the design of cryogenic and industrial gas solutions. I have also worked for Carbon Engineering where I assisted in the development of an atmospheric carbon capture pilot project.

Interests:
I like challenging myself and learning new things in the outdoors. Two of my passions are rock climbing and skiing.

Little Known Fact:
Lego is Denmark's most valuable brand.

James Wasteneys:

Goals:
Work on interesting and meaningful projects.

Experience:
My last co-op was at Cellula Robotics were I worked on electrical and control systems design for an Autonomous Underwater Vehicle (AUV) capable of Simultaneous Localization and Mapping (SLAM) in confined spaces.

Interests:
Skiing, biking, sailing.

Little Known Fact:
When I was 7 I moved from Toronto (population 2.8 Million) to Strathcona Park Lodge on Vancouver Island (population ~20)

William Kemp:

Goals:

Experience:

Interests:

Little Known Fact:

Tori Koelewyn

Goals: I would like to start a company in biotech designing and developing orthopaedic implants or robotic prosthetics (I haven't decided what excites me more).

Experience: Most of my experience has been in industry; currently I work part time in the quality assurance department of Navigate Surgical Technologies, a local biomedical engineering company that designs and develops systems for dynamic guided dental surgery. I work with all departments to ensure that the design documentation is accurate. I am transitioning to the engineering department in the summer as a full time engineering student where I will be designing the second iteration of the product.

Interests: Long distance cycling, Gliding, Camping

Little Known Fact: I can drink a cup of water upside down.

Josh Smith:

Goals: Ultimately, I'm hoping to work in private research. I think it'd be especially cool to make significant contributions to the commercialization of nuclear fusion.

Experience: I have a background primarily based in research. Most recently, I spent the summer working as a part of the UCN Team at TRIUMF, designing and testing magnetic shielding systems for their nEDM experiment. I also have a strong background in mechanical design, having spent 8 months with General Fusion helping to design and build their SPECTOR class plasma injectors.

Interests: Outside of my academic and career pursuits, I enjoy getting outside and going hiking and camping around beautiful BC. Once FIZZ is done and I have more free time, I'd love to see the rest of the world as well.

Little Known Fact: When I applied to UBC, my second choice was the Bachelor of Fine Arts program. Had I gotten into that instead, I'd currently be an aspiring playwright.

Mohamed-Ali Hached:

Goals: In the long-run, I aim to manage market disrupting innovations. I feel that I can make a real impact on society by coupling my technical training with my understanding of commerce.

Experience: I have assisted Honeywell's Global Tracking team as a software engineer, programming an ergonomic automated PDF daily report for their MEOLUT terminals. Last year, I had the great opportunity to travel to Germany to work at the Max Planck Institute of Physics for the Structure and Dynamics of Matter where I was tasked to design multiple signal processing units and mechanical improvements on the e-gun 300 electron diffraction experimental apparatus.

Interests: Soccer, Music, seeing the world, fishing, disruptive technologies, new experiences, and absorbing as much diverse information as I can.

Little Known Fact: At the age of 13, moved from the well orchestrated Montreal to the chaotic Bangalore in India as an expat.

Bryan Luu:

Electrical Engineering Option

Goals: Get a PhD in Quantum Information; I'd love to contribute to the Quantum Revolution! Learning a new language/instrument is also a dream of mine.

Experience: All my past experiences have been research related, ranging from being a programmer in neuroscience lab, to the Perimeter Institute in Waterloo. Besides that, I have been part of UBC Sailbot, who recently recovered our Transatlantic robot, Ada. I worked on the Software Team developing control algorithms.

Interests: Sailing, Programming (C/C++, Python, MATLAB), Environmental Stewardship, Martial Arts (Taekwondo, Viet Vo Dao, and Brazilian Jiu Jitsu so far, willing to learn more)

Little Known Fact: I once taught painting at a local art studio and I have sold a painting before. Ask for more details!