JESSICA BO (YI FEI BO)

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SKILLS

Software	Python, Java, MATLAB, C, Scala, REST, Linux, git, AWS, ROS, Tensorflow, Scikit-learn
Research	LaTeX, ethics certification
Mechanical	CAD, FEM, machining, design
Electrical	Soldering, oscilloscope, sensors

EDUCATION

University of British Columbia – Grad. 2020
BASc. Mechanical Engineering

ETH Zurich – Incoming Fall 2020
MASc Mechanical Engineering

Coursework: Data Structures, Algorithms, 3D Vision, Object-Oriented Programming, Machine Learning

WORK EXPERIENCE

Software Development Intern | *Coursera* *May 2020 – Present*
- Implementing backend website features to improve user experience and meet business goals in Scala

Software Development Engineer Intern | *Amazon* *May – July 2019*
- Created a design document for a backend pipeline that registers Amazon membership events in real-time
- Used AWS cloud computing services like SNS, SQS, and Lambda to guarantee event polling and delivery
- Implemented an event processing web service with business logic in Java for the production environment

R&D Software Developer | *Blackberry QNX* *September – December 2018*
- Programmed in a real-time, embedded environment to support QNX's autonomous driving perception algorithm research, with emphasis on achieving sensor fusion between LiDAR and stereo cameras
- Developed an efficient LiDAR processing algorithm that detects object candidates and free space with C
- Created 2D and 3D LiDAR visualization tools using C and MATLAB for demoing at CES 2019

Research Student | *CERTEC, Design Sciences at Lund University* *May – June 2017*
- Exercised engineering design principles to design and prototype a handheld device for stroke rehabilitation
- Integrated multiple accelerometer sensors with an Arduino to provide users with motion-triggered feedback
- Fabricated a lightweight thermoplastic wearable that achieved high satisfaction in test users

TECHNICAL PROJECTS

Attentiv Medical | *entrepreneurship@UBC* *October 2019 – Present*
RBC Get Seeded Award, Innovation on Board Startup Competition - Runner-Up, New Ventures BC Semi-Finalist, New Venture Design Best Project & Industry Award, Microsoft Discover AI - Healthcare Winner
- Designed a patentable bioelectric sensor and monitoring system for IV catheters used to detect IV infiltration
- Strategized business and clinical partnerships to successfully approach medical device commercialization

Wheelchair Detection and State Estimation| *CARIS Robotics Lab, UBC* *September 2019 – Present*
1st Place Oral Presentation at Multidisciplinary Undergrad Research Conference 2020
- Used ensemble classification and deep learning techniques to develop a wheelchair detection and orientation estimation algorithm using 2D laser scanner data
- Proposed a real-time wheelchair state estimation pipeline for mobile robots

H4PTIC Sensory Prosthesis | *Hatching Health 2019* *March 2019 – Present*
Best Technical Innovation at Hatching Health, 1st Place Winner at Speak out for Engineering
- Integrated pressure-sensitive feedback to prosthetics to restore the sense of touch in amputee patients

HoloLens Point Cloud Registration | *3D Vision, ETH Zurich* *February – May 2018*
- Applied the *Iterative Closest Point* and *RANSAC* algorithms to the *Guaranteed Outlier Removal* point cloud registration algorithm using MATLAB to improve efficacy and error.