

Ro-ee Tal

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WORK EXPERIENCE

AMAZON WEB SERVICES | SOFTWARE DEVELOPMENT ENGINEER

Jun - Aug 2019 | Cape Town, SA

- Designed and developed an internal, containerized stream-processing data analytics tool and launched it to production.

PRINCIPLES OF SOFTWARE CONSTRUCTION | TEACHING ASSISTANT

Sep - Dec 2018 | Vancouver, CA

- Lead programming labs, design review sessions and office hours to help students debug and understand core concepts.

QUANTUM DEVICES GROUP | RESEARCH ASSISTANT

Jan - Apr 2018 | Vancouver, CA

- Assisted in experimental research in topological quantum computing by conducting transport experiments of superconductor-semiconductor nanowire quantum devices and analyzing data, to characterize device behaviour.
- Explored additional fabrication recipes to improve proximity effect of superconducting contacts in the nanowire devices.
- Expanded the lab's Igor codebase to support asynchronous data measurement, making experiments up to 4x faster.

QUANTUM DEVICES GROUP | SUMMER RESEARCH ASSISTANT

May - Aug 2017 | Vancouver, CA

- Prototyped a 17 bit lock-in amplifier which has 1 bit more precision than the industry standard and is 10x cheaper, and designed the housing and PCB.

TECHNICAL PROJECTS

FYBR SOLUTIONS INC. | CAPSTONE PROJECT

Sep 2019 - Apr 2020 | Zurich, CH, Vancouver, CA

- Self directed deep learning research on fusing depth into RGB aerial images to improve region proposal for tree crown instance segmentation (in a group of three).

UBC SAILBOT | SOFTWARE DEVELOPER

Jan 2018 - Jan 2019 | Vancouver, CA

- Worked on simulating control dynamics of the sailboat as well as designing and implementing a RRT* local path-finding algorithm in Python to visualize path optimization given real-time constraints.

INSTRUMENT DESIGN | A FULLY AUTONOMOUS AND INTELLIGENT ROBOT

May - Aug 2018 | Vancouver, CA

- Received the best prototyping grade for building the only robot with computer vision navigation out of 16 groups.
- Analyzed the challenge and designed, prototyped and manufactured the robot from scratch in a team of four.
- Focused on integration of neural network object detection into a PID navigation system.

EDUHACKS | REAL-TIME COMPREHENSION ASSISTANT AI

Sep 2017 | Vancouver, CA

- Developed a real-time comprehension assistant web platform with 4 other students at a 24 hour hackathon, designed to assist youngsters with reading disabilities by automatically generating contextual questions.

UBC ORBIT | COMMAND AND DATA HANDLING TEAM LEAD

Sep 2016 - Sep 2017 | Vancouver, CA

- Lead the Command and Data Handling sub-team (5 developers) and developed the satellite's communication system, which is resilient to radiation-induced bit-flips and latch-ups.
- Published design to IAC: Duplicated Voting Processors for the Low Cost Radiation Hardening of Computers.

EDUCATION

UNIVERSITY OF BRITISH COLUMBIA

Expected 2021 | Vancouver, CA

BASc Engineering Physics | Dean's Honor List

ETH ZURICH

Sep 2019 - Feb 2020 | Zurich, CH

MSc Exchange Semester in Computational Science and Engineering | ML/AI specialization

SKILLS & INTERESTS

LANGUAGES C | C++ | Java | Python | Matlab | Mathematica | SQL

TOOLS Git | Gradle | Travis CI | JUnit | Tensorflow | PyTorch | wandb | Simulink | Docker | AWS

DESIGN TOOLS Solidworks | Maya | Photoshop | Premier

I LIKE Walking My Doggy | Classic Fiction | Tarantino Films | Philosophizing | Soccer | Rugby