BEN HUCKELL

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SOFTWARE SKILLS

Advanced: Python • R • SQL • Git • PyTorch

Proficient: C++ • OpenCV • Java • Keras • C# • Linux OS • MATLAB • TensorFlow

STATISTICS/DATA SCIENCE SKILLS

Statistics & Probability Fundamentals • Regression Analysis • Data Cleaning/Processing • Data Structures & Algorithms • Predictive Modelling • Time Series Forecasting • Deep Learning • ML Models

EDUCATION

Bachelor of Applied Science in Engineering Physics — University of British Columbia

Specialization in Computer Science • Minor in Statistics • 3.80 GPA — Graduating: April, 2022 — Vancouver, BC

EXPERIENCE

RBC Capital Markets | *Data Scientist*

May 2021 - Present — Vancouver, BC

- Establishing robust data pipelines to relay client opportunities to FX desk; identified $27.8M in new market share to pursue
- Investigating quantitative modelling techniques to identify client transactional anomalies, and predict future trading volume

Tesla, Inc. | *Software Automation Engineering Intern*

May 2020 - August 2020 — Vancouver, BC

- Created image processing pipelines using Python/OpenCV, and deployed PyTorch CNN architectures to establish a computer vision platform for manufacturing defect and dimension detection
- Integrated robust CI/CD pipelines into the software development process using Jenkins, Groovy, Git, C# thereby eliminating code errors, reducing production downtime, and decreasing development and commissioning time by upwards of 600%

Tesla, Inc. | *Automation Controls Engineering Intern*

January 2019 – April 2019 — Fremont, California

- Managed creation of a production-capable demonstration robotic welding cell, achieving 55% reduced cost of current cells
- Led software development and unit testing of Kuka/Fanuc Robot Function Blocks; currently deployed in 700+ robots across multiple factories

Steel-Craft Door Products Ltd. | *Software Developer*

May 2018 – August 2018 — Edmonton, Alberta

- Engineered software systems with Visual C# to increase the ease with which repetitive tasks are managed and carried out
- Developed Python scripts on a Raspberry Pi to export PLC data to Node-RED dashboard for remote monitoring purposes, and SQL database to log system data

STUDENT TEAM INVOLVEMENT

Saros Investment Club | *Co-founder, Quantitative Trading Lead*

September 2020 – Present — Vancouver, BC

- Co-founded a small investment club specializing in quantitative and algorithmic trading of OTC market securities
- Programmed and deployed fully automated OTC technical analysis-based trading system (Sharpe Ratio 2.84), and ML-based earnings prediction software (Sharpe Ratio 1.70)
- Created robust backtesting framework to quantitatively evaluate algorithmic strategies

UBC Rocket | *Avionics Lead - Spaceshot Sub-team*

September 2018 – January 2021 — Vancouver, BC

- Pursuing the Base 11 Space Challenge, which offers a prize to the first student-led design team to design, build, and launch a single-stage, liquid fueled rocket to an altitude of 100 km (Kármán Line)
- Designed flight computer software with STM32 family MCU and C++; developed MATLAB Simulink system for HIL testing

TECHNICAL PROJECTS

Advanced Deep Learning Methods in Neutrino Event Reconstruction - Capstone — 2021

PyTorch • Deep Learning • Panoptic Segmentation • Particle Physics • Big Data

Citadel Securities West Coast Invitational Datathon - 1st Place (2021) — 2020, 2021

Python • Data Processing • Regression Analysis • K-Means Clustering • Data Visualization

Machine Learning Self-Driving Car Simulation - 3rd Place — 2019

Python • Computer Vision • OpenCV • Keras • TensorFlow • Linux OS • ROS • Reinforcement Learning

Autonomous Robot Competition - 1st place — 2019

C/C++ • STM32 • State Machine Design • OnShape • Prototyping • PID Control

Fantasy Baseball Draft Optimization Sofware — 2018

Python • SQL • Visual C# • Web Scraping • Statistical Analysis • DB Design

More information about all projects can be found at www.benhuckell.ca, or by clicking on the project title