

Billy Fung

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EDUCATION **University of British Columbia**, Vancouver, BC, Canada **2015**
B.A.Sc. Engineering Physics, Mechatronics specialization

SKILLS Data driven backend engineering, Python, R, Javascript, PostgreSQL, AWS, GCP

EXPERIENCE **emhTrade**, Auckland, New Zealand.

Lead Software Engineer

March 2016 to April 2020

- designed and developed a modular billing system to support complex electricity tariffs
- worked on cost reflective tariff design, used for optimising transmission pricing within the grid
- created supporting backend microservices for mobile app, including backend REST and GraphQL APIs
- developing and supporting Python services for smart grid operation, with peer to peer power sharing
- building machine learning models to forecast electricity demand, and price
- experimentation of economic market design applied to localised smart grids
- lead experimentation and analysis of load shifting of electricity demand response
- managing and maintaining continuous integration and deployment of applications to cloud servers
- automating internal trading tools to visualise risk and seek out arbitrage

DVe Technologies, Vancouver, Canada.

Lead Engineer

December 2014 to November 2015

- created and developed the initial hardware prototype for helmet mounted signalling system
- developed and tested electrical circuits within hardware device
- aided in refining software algorithms to fine tune head tilt gesture
- used Solidworks to design the mechanical enclosure for 3d printing and for plastic injection mold
- communicated with manufacturers and investors in attempts to bring product to market

Blackberry Limited, Ontario, Canada.

Reliability Systems Development Intern

May 2011 to August 2012

- developed and maintained systems for testing handheld devices involving highly accelerated lifecycle testing and failure mode analysis
- debugged board level electrical errors along with identifying hardware troubleshooting
- qualified supplier manufacturing sites through statistical analysis

PROJECTS

- [coffee information website](#)
- [automatic wireless irrigation system](#) based on moisture sensor readings
- [podcast hosting website](#)
- autonomous tape following race car