Anton Chen

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Education

The University of British Columbia ▪ *Bachelor of Science* — **Vancouver, BC**
Honours Computer Science and Statistics, with Co-op — *Sep. 2019 — Present*

- Cumulative average of 92% (4.0 GPA), latest yearly average of 96%; on Science Scholar and Dean's Honour Lists.
- **Coursework:** data structures, algorithms, OOP, software engineering, multi-threading, software architecture, applied statistics, honours linear algebra, and honours multivariable calculus (all courses received A+).

International Baccalaureate ▪ *Certificate Program* — **Calgary, AB**

- Mathematics HL (7/7) and Physics SL (7/7). — *Sep. 2017 — May 2019*

Work Experience

VIPRE Security Group ▪ *Email Security Cloud, Back-End Development Team* — **Burnaby, BC**
Software Engineer Intern, in Test — *Jan. 2021 — Present*

- Led design and development of test automation framework in Python for backend mail-processing services.
  - Fully automated back-end regression and integration testing; saved over 40 staff hours monthly from manual verification.
  - Implemented REST API endpoint testing libraries on spam and virus detecting Docker microservices.
  - Refactored existing verification methods to utilize concurrency, reducing test suite runtimes by over 65%.
- Designed and automated end-to-end unit tests with Python's Robot Framework on highly distributed AWS cloud services and MySQL databases, processing over 1.2 billion emails monthly from 50 000 business customers.
  - Wrote SQL queries to manage paid customer package configurations and cached virus sample hashes.
  - Developed Bash scripts to perform automated deployment testing across over 50 datacenters globally.
- Trained and mentored full-time software engineer hire with system architecture, scripting, and reading code bases.

Technical Projects

Vaccelerator ▪ *HackUCI 2021 Hackathon Project; Placed 2nd out of 89 teams* — *Jan. 2021*

- Member in team of five; built a web-app offering data-driven COVID-19 vaccine rollout insights and information.
- Created interactive US heatmap visualizing pandemic vulnerability by scraping 334 days of CDC data.
- Technologies Used: Python, Plotly, Pandas, HTML.

Rubik's Cube Solver Neural Network ▪ *Solo Project* — *Aug. 2020*

- Implemented a feedforward deep neural network, solving any scrambled Rubik's cube with over 70% success rate.
- Developed a data generation algorithm to produce 8 million scramble patterns and corresponding solutions.
- Technologies Used: Python, TensorFlow, Keras, NumPy, Matplotlib.

Two-Dimensional Physics Engine ▪ *Solo Academic Term Project* — *Jan. 2020 — Apr. 2020*

- Engineered a GUI application using OOP principles and MVC patterns, simulating inelastic object collisions.
- Incorporated data persistence with CRUD data-parsing algorithms, allowing users to manage environment states.
- Technologies Used: Java, JUnit, Java Swing.

Extracurricular Experience

Competitive Robotics ▪ *VEX Robotics Club* — *Sep. 2018 — Feb. 2019*

- Group member in year-long five member project to design, build, and code a VEX robot.
- Roles include robot design, construction, and programming autonomous action in ROBOTC, a C-like language.

Volunteering and Community Service ▪ *Volunteering Club* — *Sep. 2016 — Jun. 2019*

- Over 50 hours of volunteer experience; includes tournament hosting, food donation preparation, and bottle drives.
- Taught grade school kids coding fundamentals with Scratch and code.org at the *Coding Buddies* organization.

Technical Skills

Languages: C/C++, Python, Java, SQL (MySQL), R, x86 Assembly, Bash, HTML/CSS, Scheme, LaTeX.
Frameworks and Libraries: TensorFlow, Robot, JUnit, Swing, NumPy/Pandas, Matplotlib.
Developer Tools: Git, Unix/Linux, Docker/Docker Compose, Jira, Bitbucket, Confluence.
Methodologies: Agile, Scrum, Kanban.