Anton Chen

antonchen.ca • github.com/chenanton • linkedin.com/in/chenanton
Email: contact@antonchen.ca
Phone: Provided upon request

Education

The University of British Columbia — Vancouver, BC

B.Sc., Combined Honors in Computer Science and Statistics, with Co-op — *Expected Graduation: Aug. 2024*

- Cumulative average of **91% (4.0 GPA)** — Trek Excellence Scholarships recipient (**top 5%** of undergraduate students).
- **Coursework:** statistical inference*, probability theory*, optimization, machine learning, analysis. (*graduate-level courses)

Work Experience

Amazon Web Services, Inc. — Vancouver, BC

Software Development Engineer Intern — *EC2 Core Platform* — *May 2023 – Aug. 2023*

- Designed serverless architecture to mitigate resource leaks, preventing up to **244** leaks per day during peak call volume.
- Implemented eventually consistent workflow with **Lambda** functions in **Python** to concurrently delete generic resources.
- Leveraged optimistic locking and indexing strategies on **DynamoDB** table to facilitate **12 900** transactions per minute.
- Decoupled processing stages with **SQS** message queues and dead-letter queues, improving scalability and fault-tolerance.

Tesla, Inc. — Fremont, CA

Software Engineer Intern — *Cell Engineering* — *Jan. 2023 – Apr. 2023*

- Augmented conveyor cell routing automation in **Go** to route around equipment faults at Gigafactory Texas in Austin, TX.
- Designed routing algorithm on directed graph of equipment, identifying cells to reroute in linear time on equipment faults.
- Led cross-team initiative to design PLC-to-automation interface via **PostgreSQL**, enabling real-time equipment updates.
- Researched and proposed unsupervised statistical methods to enhance cell defect detection during manufacturing process.
- Applied **kernel PCA** on high-dimensional cell manufacturing data, increasing explained variance by **18%** from baseline.

Amazon Web Services, Inc. — Vancouver, BC

Software Development Engineer Intern — *EC2 Core Platform* — *May 2022 – Jul. 2022*

- Built customer-facing feature for AWS Auto Scaling, the compute service behind many AWS services (e.g. ECS, Lambda).
- Extended the EC2 Auto Scaling public API in **Java** to support autoscaling of EC2 instances on metric math expressions, directly responsible for scaling EC2 capacity worth **180 million** compute hours per week. **[Blog]** **[Documentation]**
- Utilized **CloudWatch** alarms and metric math to generate custom metric time series for **293 000** users of the feature.

VIPRE Security Group — Burnaby, BC

Software Engineer Intern — *Email Security Cloud* — *Jan. 2021 – Aug. 2021*

- Created **Python** framework to automate spam and malware email testing, eliminating **40 hours** of manual QA per week.
- Parallelized policy validation logic across multiple accounts with **Robot Framework**, reducing suite runtime by **65%**.
- Trained and mentored intermediate software engineer; responsible for the onboarding and knowledge transfer processes.

Selected Projects

Campus Safe Walk Planner — *Pinnacle Hackathon* — *Sep. 2021*

- Created webapp offering safe trip planning at Pinnacle, an invite-only hackathon for the **top 50** national collegiate teams.
- Architected pathfinding algorithm in **JavaScript**, integrating the Google Maps API with FBI crime data to route trips.

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

- Designed and trained deep neural network with **TensorFlow**, perfectly solving any Rubik's cube with **70%** success rate.

Selected Awards

- **Department of Computer Science Scholarship** — *The University of British Columbia* — *Mar. 2022*
- **Stanley M Grant Scholarship in Mathematics** — *The University of British Columbia* — *Oct. 2021*
- **Ron Riddell and Roy Douglas Scholarship in Mathematics** — *The University of British Columbia* — *Oct. 2021*
- **J Fred Muir Memorial Scholarship in Science** — *The University of British Columbia* — *Sep. 2021*

Technical Skills

- **Languages:** C, C++, Python, Java, Go, JavaScript, TypeScript, SQL, R, MATLAB, Julia.
- **Frameworks and Libraries:** NumPy, TensorFlow, Scikit-learn, Matplotlib, JUnit, Node.js, React.js.
- **Technologies and Tools:** Git, Linux, Bash, GraphQL, Redis, AWS (Lambda, DynamoDB, CDK, IAM, etc.).