Anton Chen

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Education

The University of British Columbia — Vancouver, BC

B.Sc., Combined Honors, Computer Science and Statistics — *Sep. 2019 – May 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

Incoming Software Engineer — *EC2 Core Platform* — *July 2024 – Present*

- Scheduled to return full-time to the AWS Auto Scaling team as a Software Development Engineer.

Amazon Web Services, Inc. — Vancouver, BC

Software 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 presented unsupervised ML methods (**kernel methods** on high-dimensional data) for cell defect detection.

Amazon Web Services, Inc. — Vancouver, BC

Software 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**]

VIPRE Security Group — Burnaby, BC

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

- Wrote **Python** framework to automate spam/malware email classification, eliminating **40 hours** of manual QA per week.
- 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.

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.).