# Anton Chen

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## Work Experience

### Amazon Web Services, Inc. — Vancouver, BC

***Software Development Engineer Intern, AWS Auto Scaling*** — *May 2023 – Aug. 2023*

- Overhauling the resource cleanup process for all Application Autoscaling scaling policies to mitigate customer costs.
  - Wrote **Lambda** functions to robustly identify and delete **CloudWatch** alarms with an eventually consistent design.
  - Leveraged sparse indexing and batched transactions on a **DynamoDB** table to efficiently scan and write deletion intent.

### Tesla, Inc. — Fremont, CA

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

- Augmented conveyor routing logic to redirect cells around unavailable equipment at the Gigafactory Texas in Austin, TX.
  - Designed a **routing algorithm** to identify all impacted cells in linear time and recompute shortest paths on a graph.
  - Implemented the algorithm with a worker pool in **Golang**, concurrently processing over **1 500** status updates per day.
- Researched **unsupervised methods** to improve cell defect detection during the manufacturing process.
  - Applied **kernel PCA** on high-dimensional cell manufacturing data, improving captured variance by **18%** for 2 PCs.

### Amazon Web Services, Inc. — Vancouver, BC

***Software Development Engineer Intern, AWS Auto Scaling*** — *May 2022 – Jul. 2022*

- Extended the Amazon EC2 Auto Scaling public API in **Java** to support autoscaling on custom metrics via metric math.
  - Coordinated with engineers, product managers, and a doc writer across three teams to align customer experience.
  - Persisted scaling configurations for over **230 000** users to a composite **MySQL** and **Amazon QLDB** database.
  - Feature impact of **180 million** compute hours per week, used in **10%** of all target tracking scaling policies. [**Blog post**]

### VIPRE Security Group — Burnaby, BC

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

- Built a test automation framework in **Python** to automate backend testing, saving **12 hours** a week of manual QA.
- Parallelized existing policy testing logic with **Robot Framework**, reducing overall test suite runtimes by **65%**.
- Trained and mentored an intermediate software engineer on service architecture, team workflows, and the codebase.

## Selected Awards

- **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++, Golang, Python, Java, SQL, R, JavaScript/TypeScript, LaTeX.

**Technologies:** Git, Unix/Linux, AWS, GraphQL, Redis, TensorFlow, NumPy/Pandas, Scikit-learn.

**Lifts:** Squat: 177.5 kg, Bench Press: 105 kg, Deadlift: 225 kg (done in competition; 66 kg weight class).

## Education

### The University of British Columbia — Vancouver, BC

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

- Trek Excellence Scholarship recipient (**top 5%** of undergraduates), cumulative average of **91% (4.0 GPA)**.
- *Coursework:* inference*, probability theory*, real analysis, optimization, and machine learning. (*graduate-level courses)