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*

- Trek Excellence Scholarship, awarded to the **top 5%** of undergraduate students; **90% (4.0 GPA)** cumulative average.
- **Coursework:** machine learning*, statistical inference*, probability*, stochastic processes*, NLP, CV.   (*graduate-level)

WORK EXPERIENCE

Amazon Web Services, Inc. — Vancouver, BC
Incoming Software Engineer — EC2 Core Platform — *Jul. 2024*

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

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 design with **Lambda** functions in **Python** for robust, concurrent resource deletion.
- Leveraged optimistic locking and indexing strategies on **DynamoDB** tables to facilitate **12 900** transactions per minute.

Tesla, Inc. — Fremont, CA
Software Engineer Intern — Cell Engineering — *Jan. 2023 – Apr. 2023*

- Augmented conveyor cell routing automation in **Go** to avoid deactivated equipment at Gigafactory Texas in Austin, TX.
- Designed routing algorithm on equipment directed graph, identifying cells to reroute in $\mathcal{O}(n)$ on equipment status updates.
- Researched unsupervised methods (**kernel methods**) for defect detection on high-dimensional cell manufacturing data.

Amazon Web Services, Inc. — Vancouver, BC
Software Engineer Intern — EC2 Core Platform — *May 2022 – Jul. 2022*

- Extended the EC2 Auto Scaling public API in **Java** to support EC2 autoscaling on metric math expressions; feature 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 **20 hours** of weekly manual QA.

SELECTED PROJECTS

Sparse Self-Attention for GCNs on Low-Homophily Graphs — *Feb. 2024 - Apr. 2024*
- Explored various sparse self-attention mechanisms on GCNs to efficiently model long-range feature correlations. [PAPER]

Variational Bayesian Premise Generation on Entailment Trees — *Jan. 2024 - Mar. 2024*
- Derived and implemented novel probabilistic model with **PyTorch** to generate sentence embedding trees. [PAPER] [REPO]

Wilcoxon Signed-Rank Test for Document Embedding Algorithms — *Mar. 2024*
- Presented dimensionality reduction theory and experiment on various document embedding algorithms. [PAPER] [SLIDES]

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, TypeScript, SQL, R, MATLAB, Julia, LaTeX.
- **Frameworks and Libraries:** PyTorch, TensorFlow, Scikit-learn, Matplotlib, Pyro, SentenceTransformers.
- **Technologies and Tools:** Git, Linux, Bash, GraphQL, Redis, AWS (Lambda, DynamoDB, CDK, IAM, etc.).