Timothy Chen

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Education

Pepperdine University

B.S. in Computer Science & Mathematics — *Summa Cum Laude*

- Cumulative GPA: 3.99 / 4.00
- Coursework: Data Structures, Computer Systems, Machine Learning, Image Analysis, Computer Networking
- Awards: Multiple competitive departmental scholarships (e.g. Northrop Grumman Endowed Scholarship, Keck Data Science Grant, Natural Science Division Scholarship, Faculty Staff Scholarship, Darnell Scholarship).

Experience

Amazon — June 2025 – Present

Data Engineer - Security — *Seattle, WA*

- Developed end to end pipelines aggregating ticket data from multiple internal systems to quantify engineering toil
- Created lightweight Spark SDK to standardize batch data validation (normalization, null thresholds, data types)
- Containerized ETL and inference components using ECS for improved scalability and maintainability

Amazon — May 2024 – Aug. 2024

Data Engineer Intern - Alexa — *Seattle, WA*

- Provisioned cloud infra and deployed distributed processing pipelines with Python, TypseScript, AWS CDK
- Metrics invented and delivered to directors led to a 20% boost in Alexa's B2B conversions MoM

Samsung — May 2023 – Aug. 2023

Software Engineer Intern — *Austin, TX*

- Redesigned Samsung Foundry's defect reporting tool for various in house equipment via Python on Streamlit
- Adopted by several core engineering teams, standardizing the defect reporting process

Pepperdine Information Technology — Aug. 2022 – May 2024

Software Engineer (Co-op) — *Malibu, CA*

- Built full stack applications for University administration, including esign.pepperdine.edu and sso.pepperdine.edu
- Featured in Pepperdine IT's 2024 Annual Review [Article]

Projects

Cell Detector | *Python, Roboflow, scikit-learn, Google Colab*

- YOLO-based CNN detecting 1k+ plant cells per image with .94 F1; automated annotation for biology faculty
- Many future iterations were built on this project, enriching Pepperdine's research curriculum

Intellectual Disability Balance Reference | *Applied Machine Learning*

- Built centile curves to track balance for people with intellectual disabilities, adopted in clinical practice
- Oral at the 2023 ISAPA conference in New Zealand was featured in Pepperdine's Newsletter [Article]

Skills

Languages: Python, TypeScript, C#, SQL, C++, Java, R, Assembly, JavaScript
Tools & Frameworks: IaC, CDK, AWS, .NET, MVC, ECS, PyTorch, Roboflow, Redshift, Postgres
Hackathons: Morgan Stanley CTG Hackathon Spring 2023
Leadership: Grading/TA (5 semesters) - Formal Methods/Discrete Structures, SLA (Residence Life - 4 semesters)