Stanley Yang

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SKILLS

- **Programming Languages:** Java, C/C++, Python, Shell, JavaScript, SQL, OCaml, Racket, LaTeX, MATLAB, Excel
- **Frameworks:** PyTorch, NumPy, Docker, JUnit, ReactJS, Java Spark, Java Swing, DGL, Figma, AWS, DuckDB

EDUCATION

University of Washington, Seattle, WA — Expected Graduation: June 2025

Bachelor of Science in Computer Science, Major GPA 3.92/4.00

- Relevant Courses: Software Design, Data Structure, Database, Machine Learning, Two-Year Honor Math Series
- UW ICPC Winter Programming Contest 2024 - Second Place

WORK EXPERIENCES

Amazon AI Lab's Applied Scientist Intern, Shanghai, China — Jun. 2024 – Present

Deep Graph Library: A Graph-Centric, Highly-Performant Package for Graph Neural Networks

- Implemented edge attributes in graphs and integrated **daily regression benchmarks**
- Added reverse edge feature to graph training datasets, **improving node classification accuracy** by **16%**
- Improved **CSC graph neighbor sampling efficiency by 4%** via backend **PyTorch C++ API** operator optimization
- Built a **Docker-based automated release pipeline**, integrating **unit tests** and regression framework
- Integrated **version update** automation and **AWS S3 deployment** for efficient **wheel distribution**

Teaching Assistant, Seattle, WA — Mar. 2023 – Jun. 2024

Teaching Assistant in CSE 341 & CSE 413 Programming Languages for four quarters

- Led course on functional programming, language design and **interpreter construction** using OCaml and Racket
- Conducted weekly quiz sections and held office hours for **100+ students**, addressing diverse learning needs
- Developed **autograder scripts** with **700+ test cases** and led **infrastructure development**
- Assisted professors in homework design, created rubrics, and coordinated TA grading for **600+ assignments**

Database Research Assistant, Seattle, WA — Jun. 2023 – Aug. 2023

UW PLSE (Programming Languages and Software Engineering) Lab

- Optimized data processing for **400+ million data points** using **SQLite scripts**
- **Preprocessed** and cleaned complex datasets, executing **16,000+ view scripts and queries**

PERSONAL PROJECT

Primitive Tagging for Everyday Objects Research, Seattle, WA — Jan. 2024 – Jun. 2024

- Designed semi-automatic methods for identifying **3D geometric primitives** on input meshes
- Enhanced **user interface** for intuitive region selection and primitive type specification, benefiting novice users
- Implemented functionality to crop user-selected mesh data, optimizing mesh generation
- Applied **differential 3D learning** techniques to optimize primitive shape parameters using **PyTorch**

CaCL (Change and Chance Language) Interpreter & Compiler Project, Seattle, WA — Jan. 2024 – Mar. 2024

- Built **interpreter** with comprehensive language features including **parsing, type checking**, and annotations
- Authored **1300+ lines of tests** to validate interpreter functionalities and error-handling mechanisms
- Applied **compiler rewrite strategies** to optimize code dependencies and **boost compilation speed**
- Integrated innovative features like parallel let, short-circuiting, and higher-order functions

Campus Path Finder, Seattle, WA — Feb. 2023 – Mar. 2023

- Created a **web app** using Java, **React,** and **Spark framework** to navigate 52 campus buildings
- Implemented **Dijkstra's algorithm** for navigation and **MVC pattern** for **GUI**, tested with **5000+ lines of Junit tests**

EXTRACURRICULAR/COMMUNITY INVOLVEMENT

Student Volunteer in ACM SIGMOD conference 2023, Bellevue, WA — Jun. 2023

- Assisted for **500+ scholars** across **six sessions**, supporting presenters and resolving technical issues