**Stanley Yang**

[guangyg@cs.washington.edu](mailto:guangyg@cs.washington.edu) | [linkedin.com/in/stanley-yang-9457b7252](http://linkedin.com/in/stanley-yang-9457b7252) | [az15240.github.io](https://az15240.github.io/)

**SKILLS**

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| * **Programming Languages:** Java, C/C++, Python, JavaScript/TypeScript, SQL, OCaml, Racket, MATLAB, Excel * **Frameworks:** JUnit, ReactJS, PyTorch, Java Spark, Java Swing, NumPy, MVC, Figma, Flutter, DuckDB |

**EDUCATION**

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| **University of Washington,** Seattle, WA  *Bachelor of Science in Computer Science*, Major GPA 3.91/4.00 | Expected Graduation: June 2025 |
| * Relevant Courses: Software Design, Data Structure, Database, Probability & Statistics, Two-Year Honor Math Series * UW ICPC Winter Programming Contest 2024 - Second Place | |

**WORK EXPERIENCES**

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| [**Teaching Assistant**](https://courses.cs.washington.edu/courses/cse341/23au/), Seattle, WA  *Teaching Assistant in CSE 341 & CSE 413 Programming Languages for four quarters* | Mar. 2023 – Present |
| * 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 * Led **infrastructure development** andcrafted **autograder scripts** with **700+ lines of comprehensive test cases** * Assisted professors in homework design, established rubrics, and coordinated TA grading for **600+ assignments** | |
| [**Database Research Assistant**](https://github.com/az15240/SQL-Summer-Research/), Seattle, WA  *UW PLSE (Programming Languages and Software Engineering) Lab* | Jun. 2023 – Aug. 2023 |
| * Developed **SQLite** scripts to streamline importing and testing process on datasets with **400+ million data points** * Conducted **data preprocessing** by parsing and cleaning raw data to address various complex formatting issues * Expertly executed **16,000+ view scripts and complex queries** on bulk data, ensuring scalability and robustness | |

**PERSONAL PROJECT**

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| **Primitive Tagging for Everyday Objects Research,** Seattle, WA | Jan. 2024 – Present | | | |
| * Developed user-in-the-loop semi-automatic methods for identifying **3D geometric primitives** on an input mesh * Enhanced **user interface** for intuitive region selection and primitive type specification, benefiting novice users * Implemented advanced functionality to crop user-selected mesh data, optimizing for reduced mesh generation * Utilized **differential 3D learning** techniques for automatic optimization of primitive shape parameters on **PyTorch** | | | | |
| **CaCL (Change and Chance Language) Interpreter & Compiler Project**, Seattle, WA | | Jan. 2024 – Mar. 2024 | | |
| * Implemented parsing, type checking, annotations, template expansions, mutations, and diverse data type support * Authored **1300+ lines of tests**, thoroughly validating interpreter functionalities and error-handling mechanisms. * Employed **compiler rewrite strategies** to optimize code dependencies and **boost compilation speed** * Innovative features like parallel let, short-circuiting, and higher-order functions **augment language capabilities** | | | | |
| [**Campus Path Finder**](https://github.com/az15240/Campus-Path-Finder)**,** Seattle, WA | | | Feb. 2023 – Mar. 2023 | |
| * Developed a **generic ADT** and applied it to a campus map using **Java**, tested with **5000 lines** of **JUnit tests** * Designed a **web app** and utilized **React** and **Java Spark framework** to create a user-friendly **GUI** * Analyzed a **database** comprising **5000+** campus coordinates for navigation between **52** buildings * Applied **MVC (Model-View-Controller) pattern** for GUI and employed **Dijkstra's algorithm** for navigation | | | | |
| [**“Buddies” App at DubHacks ’22 Hackathon**](https://github.com/az15240/Buddies), Seattle, WA | | | | Oct. 2022 | |
| * Led a team of four as the **Project Manager** and **UI/UX Designer** for the “Buddies” App using **Flutter framework** * Orchestrated team brainstorming sessions, managed project timelines, and designed the **GUI** using **Figma** * Showcased our project through a video demonstration and live presentation to a panel of judges | | | | |  | |

**EXTRACURRICULAR/COMMUNITY INVOLVEMENT**

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| **Student Volunteer in ACM SIGMOD conference 2023**, Bellevue, WA | Jun. 2023 |
| * Volunteered for **six research and tutorial sessions**, assisted **500+ leading scholars in the database field** * Supported session chairs and presenters in preparing session slides and videos, aiding conference proceedings * Facilitated prompt audio issue resolution by liaising with the technical team for a cohesive audio experience | |