

Joshua Yu

Los Angeles, CA | 909-202-0954 | jjy@joshyu.com | github.com/joshjyu | linkedin.com/in/joshjyu

Education

Oregon State University Bachelor of Science in Computer Science	Expected Graduation 12/2027 GPA 4.0
Occidental College Bachelor of Arts in Physics, Minor in Mathematics	05/2016 Honors and Distinction in Physics
Sidney Kimmel Medical College at Thomas Jefferson University	Candidate for Medical Degree

Skills and Coursework

Languages: Python, C++, JavaScript/TypeScript, HTML/CSS, Assembly, ELisp
Frameworks & Databases: React, Node.js, Express, FastAPI, MongoDB, REST APIs
Infrastructure & Tooling: Docker, GitHub Actions (CI/CD), Git, Linux/Bash, Pytest, Jest, mypy, Agile/Scrum
AI: Model Context Protocol (MCP), Google Cloud AutoML Vision, data labeling
Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Software Engineering, Analysis of Algorithms, Web Development, Assembly Language & Computer Architecture, CodePath Technical Interview Prep 103

Experience

CodePath <i>Tech Fellow, Technical Interview Prep 102</i>	09/2026 - Present
Mentor students through algorithms coursework in breakout sessions, articulating technical challenges and recommending solution approaches; track outcomes with instructional managers and peer fellows.	
DataFog <i>Core Contributor</i>	08/2026 - Present
<i>Python, FastMCP, Model Context Protocol (MCP), agentic AI, Git, CI</i>	
- Engineered the MCP integration for DataFog, an open-source PII detection and redaction firewall securing agentic AI workflows and LLM applications. - Shipped four Python tools (scan, redact, mask, remove) that transform files locally and return only paths and per-type tallies, plus an MCP proxy redacting wrapped servers' responses via a structure-aware payload walker. - Diagnosed a quadratic bottleneck consuming 99.4% of scan time (114M comparisons across 15K findings); recommended and prototyped an $O(n \log n)$ replacement released upstream, accelerating finding selection 26 - 107x by workload.	
CodeDay Labs <i>Open-Source Software Engineering Intern</i>	07/2026 - 08/2026
<i>TypeScript, Node.js, Express, MinIO, Multer, Agile/Scrum, CI/CD</i>	
- Shipped JPG/PNG OCR upstream into Maxun through full development, review, and release, expanding its document pipeline from 4 to 6 formats via one dispatcher branch across the parse, extract, and SDK entry points. - Diagnosed and eliminated an unbounded memory path allocating 2.8 GB on a 100-megapixel upload. - Coordinated a 5-contributor pull request across parallel upload, OCR, and UI workstreams; rebuilt the feature against current upstream after the team fork diverged architecturally.	
Develop for Good <i>Student Volunteer Software Developer Intern</i>	05/2026 - 08/2026
<i>Wix, Velo, CMS, SEO, Figma</i>	
- Rebuilt global navigation, store, and FAQ components for "Operation Be You" to WCAG 2.2 accessibility standards with GEO optimizations. - Designed a site-wide CMS architecture for dynamic event routing, executed the production release, resolved post-deployment defects, and co-authored nonprofit staff handoff documentation.	

Projects

Terminal Patrollers Game <i>C++, CMake, Ncurses, Python, FastAPI, MongoDB, httpx, REST APIs</i>	05/2026
- Built a compiled TUI client with a small team for game state, leaderboards, and user profiles, backed by a distributed microservice querying Nominatim and Overpass REST APIs asynchronously for dynamic OpenStreetMap generation. - Implemented BFS for map connectivity validation, Fisher-Yates for randomized spawning, and Manhattan distance for collision checks and objective placement.	
Get Tennis Scores Terminal App <i>Python, Textual, aiohttp, Pydantic, REST APIs, CI/CD, pipx</i>	03/2026
- Created an event-driven TUI polling REST endpoints for live professional tennis scores, validating JSON payloads against Pydantic schemas. - Established a CI/CD pipeline and packaged the application for global release distribution, resulting in 1,600 downloads.	

Publications & Previous Experience

Analysis of Axillary Lymph Node Metastasis using AI	2020 - 2021
<i>Medical School Research Fellow Ultrasonic Imaging, Aug 2021 (47 citations)</i>	
Inland Endocrine <i>Medical Assistant and Scribe</i>	2017 - 2019
Rayleigh-Bénard Convection Computer Simulation	2014 - 2016
<i>Undergraduate Research Fellow, First Author Physics of Fluids, Feb 2017 (43 citations)</i>	