

Joshua Yu

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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, C++, JavaScript, TypeScript, HTML/CSS, SQL

Frameworks & Databases: React, Node.js, Express, FastAPI, MongoDB, SQLite, Pydantic, REST APIs

Infrastructure & Tooling: AWS, Docker, Git, GitHub Actions (CI/CD), Linux/Bash, Model Context Protocol (MCP), Agile/Scrum

Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Software Engineering, Operating Systems, Web Development

Experience

Tech Fellow

09/2026 - Present

CodePath

- Facilitate breakout sessions for two sections of Technical Interview Prep 102 to mentor students through advanced data structures and algorithms coursework, articulating technical challenges, recommending solution approaches, and tracking student outcomes with instructional managers.

Software Engineer

08/2026 - Present

DataFog

- Led and shipped DataFog MCP v1.0.0 to PyPI, an open-source Model Context Protocol (MCP) server in Python (FastMCP) that lets AI coding agents detect and redact PII and credentials in local files without file contents entering the model's context.
- Accelerated scan finding selection by 26-107x and raised the file size limit 10x (1 MiB to 10 MB) while holding peak memory under 1 GB and keeping scan responses under a 25k token tool-output cap.
- Built a benchmark harness (3 file sizes x 5 formats x 5 entity densities) measuring latency, memory, and token cost to set the new limits.

Open-Source Software Engineering Intern

07/2026 - 08/2026

CodeDay Labs

- Shipped JPG/PNG OCR upstream into Maxun using TypeScript and Node.js via Agile methodologies, expanding the document processing pipeline from 4 to 6 formats.
- Resolved an unbounded memory path within the Multer and MinIO image upload pipeline, preventing 2.8 GB memory allocations during 100-megapixel payload processing.
- Coordinated the 5-contributor feature branch through a CI/CD-validated rebuild and merge after a major upstream architectural divergence.

Software Developer Intern

05/2026 - 08/2026

Develop for Good

- Translated Figma designs into WCAG 2.2 compliant global navigation, e-commerce storefront, and FAQ components utilizing Wix and Velo, while implementing technical SEO optimizations.
- Built a site-wide CMS structure for dynamic event routing, executed the production deployment, resolved post-release defects, and authored comprehensive staff handoff documentation in Notion.
- Selected as a program alum representative to share my project experience with guests at Develop for Good's inaugural Gala.

Projects

Tech Events Radar Website

09/2026

- Engineered a zero-touch Python data pipeline to aggregate tech events from 17 sources into JSON, iCalendar, and RSS feeds, utilizing RapidFuzz for deduplication with 98% precision and U.S. Census APIs for geocoding.
- Automated daily pipeline executions using Cloudflare Workers and GitHub Actions with SQLite state persisted to Cloudflare R2.
- Established system health SLOs that autonomously detect bot challenges, disable failing upstream sources, and generate incident reports.

Get Tennis Scores Terminal App

03/2026

- Built an event-driven Python terminal user interface (TUI) utilizing the Textual framework and aiohttp to asynchronously poll REST APIs for live professional tennis scores.
- Implemented rigorous data validation using Pydantic schemas and established a CI/CD pipeline, packaging the application via pipx to achieve over 1,600 global downloads.

Publications & Previous Experience

Medical School Research Fellow

2020 - 2021

Analysis of Axillary Lymph Node Metastasis Using AI | Ultrasonic Imaging, Aug 2021 (47 citations)

Medical Assistant and Scribe

2017 - 2019

Inland Endocrine

Undergraduate Research Fellow

2014 - 2016

Onset of Rayleigh-Benard Convection | Physics of Fluids, Feb 2017 (43 citations)

- First Author: Simulated Rayleigh-Benard convection using Nek5000, testing stability outputs and developing numerical algorithms in Mathematica to predict fluid flow patterns.