

Tonglu Yang

◇ [+1\(608\)-320-9249](tel:+1(608)-320-9249)

◇ tyang328@wisc.edu

◇ linkedin.com/in/tongluy/

◇ [Portfolio: tongluy.github.io/](https://Portfolio:tongluy.github.io/)

EDUCATION

University of Wisconsin-Madison

Sep 2021 – May 2024

Bachelor of Science, Computer Science

Madison, WI

- **GPA:** 3.80/4.00 / **Awards:** Linda B. Stern Scholarship for Women and STEM (\$5000), Dean's List

WORK EXPERIENCE

Full Stack Developer | Wisconsin Athletics

Apr 2022 – Present

C#, MySQL, .NET, HTML, CSS, JavaScript, AngularJS, Azure

Madison, WI

- **System Design:** Scoped and built a cost-effective, scalable C# questionnaire system, cutting third-party app expenses by \$3000 annually. Empowered users to distribute and complete customized questionnaires.
- **Large Scale Database:** Established a MySQL database for 900+ athletes, conducted data validation and unit testing in .NET MVC, ensuring streamlined data procedures and improving query response time by 13%.
- **Frontend Development:** Engineered reusable components with tag helpers, reducing development time by 40%; improved the interactivity in JavaScript and AngularJS, resulting in a 20% increase in user engagement.
- **CI/CD Pipeline Integration:** Onboarded pipelines in Azure, connected with Slack for real-time streaming notifications. Monitored commits, task updates, and system alarms via Azure DevOps APIs.
- **Leadership and Teamwork:** Led a team of 3 to troubleshoot slowness issue, using Scrum and Agile in Jira with standup meetings for efficient teamwork. Upgraded to Bootstrap 5 and MVC, resulting in a 30% server response time improvement and ensuring a seamless user experience for up to 1000 concurrent users.

Software Engineer | Center for Healthy Minds

Aug 2023 – Dec 2023

Python, AWS, RESTful, React, Docker

Madison, WI

- **Cloud Management:** Aggregated video data into structured AWS S3 buckets for optimized storage; Implemented Cloudflare with HLS, reducing buffering times by 41% for improved content delivery.
- **API Integration:** Created a React front-end for iOS, seamlessly integrated with RESTful APIs and tested using Postman; Orchestrated A/B tests with Firebase, boosting retention by 20% and feedback by 25%.
- **Machine Learning:** Applied Mediapipe and NumPy for video environment detection; Utilized OpenCV to analyze emotional expressions within video data using Python with Docker, improving accuracy by 22%.

Research Intern | UW-Madison

Jan 2022 – May 2022

C++, Linux, Kubernetes, Docker

Madison, WI

- **Operating Sytem:** Leveraged **multi-threading** for parallel processing of independent gene-related tasks and implemented **caching** strategies to store frequently accessed gene data locally, reducing analysis time by 37%.
- Deployed Docker containers onto a Kubernetes cluster for horizontal scaling, reducing downtime by 14%.

PROJECT

Enhanced Xv6 Kernel | C, Unix, GDB, QEMU

Mar 2023

- Implemented stride scheduling with dynamic ticket allocation, boosting runtime performance by nearly 50%.
- Built Copy-on-Write forking and lazy zero-page allocation for xv6 with the support of GDB and QEMU, reduced average costs of memory allocation from 1000-10000s CPU cycles to 100s CPU cycles.

SKILLS

- Java, C/C++, C#, Python, Go, TypeScript, XML, GCP, MongoDB, Jenkins