Yanni Zhuang

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EDUCATION

University of Illinois Urbana-Champaign, Grainger College of Engineering — May 2026
BS/MCS in Computer Science, Minor in Math — GPA: 3.9
Relevant Coursework: Machine Learning, Applied Parallel Programming, Systems Programming, Algorithms, Computer System Organization, Computer Graphics, Numerical Analysis, Probability and Statistics

WORK EXPERIENCE

Software Engineering Intern — May 2024 – August 2024
Modern Treasury — *New York, NY*
- Designed and implemented new data ingestion infrastructure, achieving a 275x throughput improvement
- Developed new input validation system, resulting in 30x performance gain and enhanced observability
- Employed task pipelining and query batching, minimizing CPU idle time and reducing database load
- Identified and optimized bottlenecks in data ingestion systems by leveraging Datadog traces

Course Assistant — August 2023 - Present
University of Illinois Urbana-Champaign, Computer System Organization — *Urbana, IL*
- Graded homework and assessments efficiently for accuracy and comprehension

University of Illinois Urbana-Champaign, Introduction to Computer Science II — *Urbana, IL*
- Provided personalized assistance through office hours to 1,500+ students
- Aided in the development of new machine problems and course material

Undergraduate Research Assistant — June 2023 – Present
Parallel Programming Laboratory — *Urbana, IL*
- Assisted with development of parallel I/O library for Charm++ to speed up read and write operations by 400%
- Constructed benchmarks to verify functionality of non-shared memory and shared memory Charm++ builds

ORGANIZATIONS

Technical Development Lead | *TypeScript, SvelteKit, NestJS, MongoDB, AWS* — February 2023 – October 2023
Reflections/Projections Development Team
- Architected a robust QR Code-based attendance tracking system to track 1,900+ attendees
- Interfaced with AWS S3 to support resume upload, storage, and distribution from attendees to corporate sponsors
- Designed and deployed a responsive schedule component and staff dashboard using Svelte and SvelteKit

AMD Security Software Engineer | *PAPI, AMDuProf, Python* — February 2023 – August 2023
Disruption Lab at Gies
- Conceptualized a SVM learning model to accurately classify malware and non-malware programs
- Employed tooling such as PAPI and AMDuProf to collect data from various HPCs while running malware

SpaceShot Avionics Software Developer | *HTML, TypeScript, three.js* — August 2022 – February 2023
Illinois Space Society
- Collaborated on a 5-person team to develop a full-stack rocket rendering application
- Migrated and refreshed the visual designs of portions of the Ground Station Software webapp with Bootstrap

PROJECTS

PrairieCal | *HTML, CSS, JavaScript, React, ExpressJS, MongoDB* — February 2023 – April 2023
- Conceptualized a full-stack application to automatically store PrairieTest exam reservations into calendar services
- Scraped and parsed user's PrairieTest exam scheduling page data into iCal format for cross-platform compatibility
- Implemented authentication through OAuth tokens to ensure integrity of user data

Chessboard Digitizer | *Python, NumPy, OpenCV* — March 2022 – November 2022
- Implemented a lens correction algorithm to maximize camera clarity and precision
- Utilized OpenCV to perform piece analysis to track movement and ensure move legality in real time

Languages/Libraries: C++, Java, Python, TypeScript, Ruby on Rails, SQL, ExpressJS, NestJS, Svelte
Technical Skills: Git, Docker, Amazon Web Services, RESTful Web Services, PyTorch, OpenCV, MongoDB