**Yanni Zhuang**

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**EDUCATION**

**University of Illinois Urbana-Champaign** May 2026

*BS/MCS in Computer Science, Minor in Math*

Relevant Coursework: Algorithms, Machine Learning, Applied Parallel Programming, Communication Networks, Systems Programming, Computer System Organization, 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 Urbana, IL*

* Integrated cheating detection mechanisms into autograder pipeline, improving plagiarism detection
* Graded homework and assessments efficiently for accuracy and comprehension
* Provided personalized assistance through office hours to 2,500+ students

**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%
* Developed distributed data streaming library for high performance computing applications

**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 PraireTest 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/Frameworks:** C++, Java, Python, TypeScript, Ruby on Rails, SQL, ExpressJS, NestJS, Svelte

**Technical Skills:** Git, Docker, Amazon Web Services, RESTful Web Services, PyTorch, OpenCV, MongoDB