Alex Yang

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EDUCATION

University of Illinois at Urbana-Champaign — May, 2026
Bachelor of Science in Computer Science, Minor in Mathematics — *GPA: 4.0/4.0*

- Relevant Coursework: Distributed Systems, Data Structures, Algorithms, System Programming, Database Systems, Computer Architecture, Probability & Statistics for CS, Combinatorics

EXPERIENCE

Course Assistant (System Programming), *UIUC* — Aug 2024 - Current

- Providing individualized guidance on topics including memory allocation, multithreading, signals, and networking
- Conducting weekly office hours and assisting in lab sessions to reinforce course concepts and troubleshoot coding issues
- Developing and deploying a custom on-demand autograder for immediate student feedback

Software Engineer Intern, *Capital One* — Jun 2024 - Aug 2024

- Incorporated a model to predict optimal contact times into a Java SMS/Push fulfillment service, improving daily interactions for 600,000+ customers
- Designed and deployed a Python API to expose the prediction model, implementing auto-failover, multi-region deployment, and rollback deployment to ensure 99.9% uptime
- Created food location search website utilizing Next.js, Go, SQLite, and a GraphQL API to filter company options based on nutritional needs/dietary restrictions

Software Engineer (API/Infra), *Reflections Projections* — Feb 2024 - Current

- Overseeing and managing the technical infrastructure for the Midwest's largest student run tech-conference, including registration, event management, notifications, newsletter distribution, and puzzle platforms
- Deployed API servers on an Linux-based EC2 instance with 0% downtime during updates by implementing a blue-green deployment strategy
- Developed a robust, custom CI/CD pipeline for the API using Code Deploy, Code Pipeline, and Github Actions
- Achieved 96.55% testing coverage, ensuring reliable, seamless CI/CD by developing testing framework using Jest

Backend Developer (API), *HackIllinois* — Sep 2023 - Feb 2024

- Designed RESTful API endpoints used by 900+ participants, staff, and sponsors in UIUC's signature hackathon using TypeScript and Express
- Reduced costs by 98.5% by redesigning database schemas and transitioning from a microservices architecture to a monolith architecture
- Achieved a 99% reduction in bandwidth usage for storing/viewing applicants' resumes by developing a service to facilitate user-specific uploads/downloads to S3

PROJECTS

Senior Assassins | *MongoDB, Express, React, Node.js, Javascript*

- Created a full stack web application on a MERN stack to facilitate a live action game used by over 400 players/admin
- Saved tens of hours of labor by developing and implementing full automation, including signup, personalized email notifications, and game logic automation

Grocery Deal Finder | *Python, Selenium, GeoPY, JavaScript, React, Next.js*

- Created website to find best grocery store deals near the user
- Leveraged Selenium to dynamically scrape weekly grocery deals, handling for a multitude of grocery website formats
- Utilized GeoPY and Google Maps API for location-based, personalized results

AI Chinese Chess | *C++*

- Created a player vs computer, CLI version of Chinese Chess in C++
- Implemented the AI player using a minimax algorithm with alpha beta pruning on a game tree, and a Zobrist hashing based transposition table for increased performance

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript, TypeScript, HTML, CSS, Golang, SQL, GraphQL
Technologies: Node.js, React, Next.js, Express, Flask, MongoDB, AWS, Jest, Github Actions