


Alex Yang

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EDUCATION

University of Illinois Urbana-Champaign | Grainger College of Engineering

May 2026

- *Bachelor of Science in Computer Science* GPA: 4.0/4.0
- Relevant Coursework: Data Structures, System Programming, Distributed Systems, Database Systems, Algorithms, Computer Architecture, Probability & Statistics for CS, Combinatorics
- Awards
 - Susquehanna International Group x UIUC algorithmic coding challenge, 2nd place (2023)
 - Capital One Intern Hackathon, 1st place (2024)

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript/TypeScript, HTML, CSS, Golang, SQL, GraphQL

Technologies: Node.js, React, Next.js, Express.js, Flask, MongoDB, AWS, Jest, Github Actions

WORK EXPERIENCE

Software Engineer Intern, Capital One

Jun 2024 - Current

- Created food location search website utilizing Next.js, Go, SQLite, and a GraphQL API to filter company options based on nutritional needs/dietary restrictions
- 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
- Wrote automated unit tests in pytest to achieve 92% coverage

Software Engineer (API / Infra), Reflections Projections | [Github](#)

Feb 2024 - Current

- Deployed javascript 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 | [Github](#)

Sep 2023 - Feb 2024

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

Lead Computer Science Instructor, CoderDojo

Mar 2022 - Apr 2023

- Taught a classroom of 15+ students the fundamentals of programming, problem solving, and algorithm design
- Guided students in building their own applications/projects using Scratch and Python

PROJECTS

Senior Assassins Web Application | [Github](#) | [Demo](#)

- Created a full stack web application 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
- Smoothly connected front-end and back-end by implementing a RESTful API using Express.js and MongoDB

File Hosting Application | [Github](#)

- Developed a TCP based client-server application in C allowing users to host files on a public server
- Implemented a custom text-based protocol to validate requests and handle bad/malicious requests from clients

AI Chinese Chess | [Github](#)

- Created a player vs computer, console-based version of Chinese Chess in C++
- Implemented the AI player using alpha beta pruning on a game tree, and a Zobrist Hashing based transposition table for maximum efficiency