


# 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

## 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

- Benchmarking various ML models to optimize contact times, enhancing customer engagement and timely payments
- Establishing reproducible training workflows, optimizing performance and ensuring consistency in machine learning model training and deployment processes by leveraging Kubeflow, Kubernetes, and Snowflake
- Implementing robust pipelines for the API infrastructure, enabling access to the ML model and implementing features such as auto-failover and rollback deployment

**Software Engineer (API / Core), Reflections Projections | [Github](#)** Feb 2024 - Current

- Deployed API servers on EC2 with ZERO downtime during updates by implementing a blue-green deployment strategy
- Developed a robust CI/CD pipeline for the API using Code Deploy, Code Pipeline, and Github Actions
- Achieved 96.55% branch 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 Express.js and Node.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 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
- Utilized MongoDB for data storage, including player profiles, game data, and player statistics
- Smoothly connected front-end and back-end by implementing a RESTful API using Express.js and MongoDB

**Grocery Deal Finder | [Github](#)**

- A grocery deal finder that finds the best product deals based on user location and target grocery store
- Scrapes the web for the best product deals weekly and stores them on the API server for easy access by the frontend

**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