

# Yanzheng Wu

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## EDUCATION

### Duke University

Aug 2023 - May 2025

- Master of Science, Computer Science

GPA: 3.77

### University of Minnesota, Twin Cities

Sep 2021 - May 2023

- Bachelor of Arts, Computer Science and Math Minor
- Honors: Dean's List (2022, 2023)

GPA: 3.86

### University of Utah

Sep 2019 - May 2021

- Bachelor of Science, Computer Science
- Honors: Dean's List (2020, 2021), Academic Excellence Scholarship

GPA: 3.79

## TECHNICAL SKILLS

**Languages:** Python, C++, Java, C#, Swift, JavaScript, TypeScript, SQL, HTML, CSS, C

**Frameworks and Tools:** Node.js, Express.js, Flask, SpringBoot, React.js, Vue.js, Bootstrap, MongoDB, MySQL, SwiftUI, SwiftData, Spring Data JPA, JWT, AWS/GCP, Git, Docker

## PROJECTS

### Full-Stack Job Portal Application | *MongoDB, Express.js, React.js, Node.js, Auth0, Google OAuth* Spring 2025

- Developed and deployed a full-stack job portal enabling users to post, apply, filter, and search jobs based on keywords and geolocation.
- Integrated Auth0 and Google OAuth for secure authentication and registration, including user profile management and authorization.
- Built a user-friendly frontend with React.js and state management for seamless navigation across the homepage, job listings, and user dashboards.

### Travel Log Application | *Swift, SwiftUI, SwiftData*

Fall 2024

- Developed a travel log iOS application enabling users to record and relive travel memories with interactive features such as adding photos, notes, and music.
- Utilized MapKit to implement interactive, map-based trip visualization, dynamically displaying travel locations on a U.S. map, and leveraged MusicKit to enable users to associate trips with personalized songs from their Apple Music library.
- Leveraged SwiftData for efficient and persistent data storage, enabling seamless offline access to the app.

### Full-Stack Mini-Amazon | *Python, CSS, PostgreSQL, Flask, HTML*

Spring 2024

- Built a full-stack web application replicating key functionalities of an e-commerce platform.
- Led the development and implementation of features such as product catalog management, shopping cart, order processing, and user reviews.
- Implemented account creation, product browsing, purchasing, virtual currency management, and the ability to leave reviews for products and sellers.
- Utilized Flask for the backend, with a focus on API design and implementations, database architecture using PostgreSQL.

### Online UNO Card Game | *TypeScript, Vue.js, MongoDB, Node.js, HTML*

Spring 2024

- Created a dynamic and scalable UNO card game with Vue.js as frontend, integrated with Vue Router, with a Node.js backend and MongoDB.
- Designed and supported a RESTful API for game interactions, ensuring scalability and efficiency with deployment in Kubernetes.
- Implemented secure user authentication and role-based access control (RBAC), enabling multiple level authenticated users, including admin roles for management.
- Utilized an end-to-end (E2E) testing suite and Gitlab CI/CD pipeline to maintain application integrity and streamline deployment processes.

### Drone-Robot Simulation | *C++, JavaScript, HTML*

Fall 2022

- Developed a simulation system for drones and robots, navigating 3D maps of the University of Minnesota (UMN).
- Applied Agile methodology to manage project tasks efficiently.
- Implemented trip scheduling for robots, with drones autonomously transporting them to designated destinations.
- Deployed a GUI using HTML and JavaScript, enabling users to select start and end points, with real-time tracking and data visualization of robot and drone movements.
- Employed the Decorator design pattern to improve the flexibility of drone power management and implemented the Singleton pattern for efficient backend data collection and processing.