

# Patrick Jiang

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## EDUCATION

### Northwestern University

Evanston, IL

*Bachelor of Arts/Master of Science in Computer Science*

*Jun 2024 (B.A.)/Dec 2024 (M.S.)*

**Cumulative GPA:** 3.80/4.0

**Relevant Coursework:** Full Stack Engineering, Agile Software Development, Scalable Software Architectures, Software Quality Engineering, Rapid Software Prototyping, Design & Analysis of Algorithms, Data Structures & Algorithms, Deep Learning, Intro to AI/ML, Human Computer Interaction, Computer System Security, Computer Systems & Networking

## EXPERIENCE

### Software Engineer Intern

Jun 2024 – Dec 2024

*Caterpillar Inc.*

*Chicago, IL*

- Developed RESTful APIs and CI/CD pipeline test automation for APIs and UI using Java, Cucumber, Cypress, and Azure DevOps for Cat Foresight, a customer-facing web application and enterprise API for condition monitoring
- Refactored test automation scenarios while improving test coverage, reducing technical debt by 60%
- Engaged in agile methodology through sprint planning and code reviews on Azure DevOps

### Software Engineer Intern

Jun 2021 – Sep 2021

*Mercur*

*Sydney, AU*

- Developed an internal tool using Retool with SQL and APIs to automate daily customer data input processes
- Migrated and rebuilt the company website using Webflow with a content management system, increasing website traffic by 20%

### Student Org President

Jun 2023 – Jun 2024

*Refresh Dance Crew*

*Evanston, IL*

- Directed a dance team of 90+ active members, serving as the leader of a nine-person executive board
- Coordinated all operations including quarterly recruitment, financial transactions, artistic direction, public relations, venue bookings, and DEI initiatives

## PROJECTS

### Rental Delivery Tracker – Caterpillar Hackathon 3rd Place

Jul 2024

- Developed a full-stack delivery tracker app using React and AWS allowing non-authenticated customers, third-party drivers, and dealers to view, update, and report delays for delivery status
- Implemented innovative Voice AI feature using Vapi API to improve customer digital experience
- Awarded "Standing Ovation" individual recognition award for individual contributions and leadership

### FitNU Full-Stack Web App

Jan 2024

- Developed a full-stack workout buddy-pairing app using React and Firebase allowing Northwestern students to post about and search for gym activity and chat with other algorithmically paired users
- Implemented test automation cases in Cypress and Jest with CI/CD pipeline integration using Github Actions, achieving 100% test coverage
- Applied Agile and Swarm methodologies in a team environment across weekly sprints

### Cloud-Native Photo App

Jun 2023

- Developed a cloud-native multi-tier photo-sharing app with a Python client and Express.js web service allowing users to upload, download, display, and analyze images
- Implemented REST APIs and AWS infrastructure including S3, RDS (MySQL), and EC2 instances
- Added event-driven functionality using AWS Lambda to analyze images upon upload and store results in S3

## SKILLS & INTERESTS

**Technical Skills:** Java, React, JavaScript/TypeScript, C++, C#, Python, Django, SQL, AWS, Azure, Firebase, Cypress, Cucumber, Jest, Postman, Scheme, HTML/CSS, Unix, Git, Agile

**Languages:** English—Native, Mandarin—Fluent, Spanish—Limited Working Proficiency

**Interests:** Boy Scouts of America (Eagle Scout c/o 2019), Hip Hop Dance, Rowing, Horology, Competition Math