

# Xinrui(Richard) Yi

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## EDUCATION

### Northeastern University

Master of Science in Computer Science, **GPA: 4.0 / 4.0**

San Jose, CA  
09/2023 - **06/2026**(expected)

### University at Buffalo

Bachelor & Master of Science in Civil Engineering, CS-Related GPA: 4.0 / 4.0

Buffalo, NY  
02/2017 - 05/2021

## SKILLS

**Languages:** Python, Java, C++, C, C#, JavaScript, HTML/CSS, Ruby, Swift, Go, Kotlin, R, Dart.

**Tools:** Kubernetes, Jira, RESTful API, SpringBoot, Docker, Linux, AWS(S3, EC2, Lambda and etc.), Agile, Git.

**Frameworks:** Angular, Django, React, Node.js, Flask, Junit, Pytest, PyTorch, TensorFlow, Ruby on Rails, Flutter.

**Database/Big Data:** MySQL, MongoDB, Kafka, Hadoop, Tableau, Hive, MapReduce, Pandas, Mybatis, SQLite.

## WORKING EXPERIENCE

### China Railway Major Bridge Reconnaissance & Design Institute

*Software Engineer*

Wuhan, China  
July 2021 - July 2023

- Developed and maintained **an internal workflow automation software** for engineers to generate drafts based on predefined parameters and templates improving the efficiency of design cycle for **30%**.
- Utilized **C# with .NET API** to build robust and scalable software, collaborated with team members from other groups to gather feedback and requirements for new features
- Implemented **MySQL** database to efficiently store over **500+** engineering draft parameters and templates.
- Employed **MSTest** to perform unit and integrations tests, resulting **85%+** test coverage

### University at Buffalo

*Machine Learning Research Assistant*

Buffalo, NY  
Jan 2021 - May 2021

- Trained a **CNN** model using **Tensorflow** for automated detection of structural damage on bridge decks.
- Built a **Python web scraper** to collect images of bridge decks to create a comprehensive dataset for model training and validation
- Conducted rigorous model **performance evaluation**, fine-tuning, and optimization, achieving **15%** improvements in accuracy.

## SELECTED PROJECTS

### BiteWise: AI-Powered Meal Planning Android App | *Flutter, LLM, Firebase*

[\(Github Link\)](#)

- Collaborated with team to design a meal tracking and planning App using **Flutter** framework & **Firebase**.
- Integrated **Google's Gemini AI**, enabling the application to offer personalized recipe suggestions based on user's dietary preferences, habits, and health goals.
- Utilized the **Chain of Thought** prompting to minimize hallucination and ensure reliable AI response.

### Rate NEU Professor Website | *Java, SpringBoot, MySQL, Kubernetes*

[\(Github Link\)](#)

- Developed a **full-stack** interactive website using **React** for frontend and **Java** for backend.
- Implemented **Servlets** to manage HTTP requests, and utilized **JDBC** for database connectivity, enabling robust data management and real-time updates of reviews and comments.
- Integrated **Kubernetes** to manage, scale, and ensure the high availability of the website, enhancing deployment efficiency by **30%**.

### BlackJack Game | *Python, Pygame, Unittest*

[\(Github Link\)](#)

- Developed a fully functional Blackjack game using **Python** and **Pygame**, demonstrating proficiency in **OOP** and game logic implementation.
- Developed comprehensive tests using **Unittest** to validate all possible scenarios.
- Presented the final product in a poster session at CES 2024.