Jiayu Liu

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New York University *Sept. 2022-May 2024*
Master of Science in Computer Engineering, GPA 3.6/4.0 *New York City, NY*

- **Courses**：Internet Architecture and Protocol, Data Structure and Algorithms, Computer Systems Architecture, Machine Learning, Real Time Embedded Systems, Principle of database systems
- **Scholarships and awards**: Yearly Merit Scholarship for two consecutive years starting from Fall 2022

Boise State University *Aug. 2018-May 2022*
Bachelor of Science in Computer Science, GPA 3.7/4.0 *Boise, ID*

- **Courses**：Data Structures, Design and Analysis of Algorithms, Agile Development, Operating Systems, Linear Algebra
- **Scholarships and awards**：Dean's List with Honors: Spring 2020, Fall 2020, Spring 2021, Fall 2021;
  Yearly GEM Scholarship for four consecutive years starting from Fall 2018

TECHNICAL SKILLS

- **Languages**: Java, JavaScript/Typescript, Python, C, SQL
- **Frameworks**: Nest.js, Spring boot, Django
- **Tools**: Docker, Git, Heroku, MySQL, Postman
- **Miscellaneous**: MS Office, VS Code, Rest API, Eclipse, Mac OS, Windows

WORKING EXPERIENCE

Ra Labs *May 2023-Present*
Software Engineer Intern *New York City, NY*

- Build backend services and developed smart contracts for a data trading platform using Solidity and TypeScript.
- Conducted unit testing of Solidity smart contracts using the Hardhat testing framework.
- Implemented user interfaces components using React, improving the overall usability of the platform.
- Collaborated with the frontend team to integrate backend services with React components, enhancing the user experience.

PROJECT/RESEARCH

Amusement Park Web App *Jan. 2023-May 2023*
Principles of Database Systems in-class Final project *New York City, NY*

- Collaborated with a team of three to analyze product requirements and design a scalable database system using Oracle Database Modeler.
- Implemented the designed database system into a web application using Django, enabling essential functionalities such as CRUD operations, user sign-in/sign-up, shopping cart management, and streamlined checkout.
- Utilized Django's ORM to ensure efficient data management and retrieval, optimizing the performance of the web application.
- Implemented secure authentication and authorization mechanisms for user management, leveraging Django's built-in authentication system.

New Hire Onboarding Application *Jan. 2022-May 2022*
Sponsored Capstone Project with Micron Technology *Boise, ID*

- Collaborated with Micron Technology on a 4-month onboarding application project, developing a new hires' training platform
- Utilized Angular with bootstrap for the frontend, ASP.NET for the backend, and MongoDB for the database to create a comprehensive, user-friendly training platform
- Implemented CRUD functionalities for various training modules and established role-based access control for different users, ensuring that users had access only to the modules assigned to them
- Utilized a test-driven development process with Unit and Integration testing and employed Selenium WebDriver to test the frontend and Postman to test endpoints
- Demonstrated experience with Agile Development and managed the team's GitHub repository, including setting up CI/CD with GitHub Action, creating and assigning tasks, reviewing pull requests, squashing commits, and resolving merge conflicts

Joint research project between Boise State University & University of Wisconsin-Madison *Jan.2021-Jan.2022*
Undergraduate Research Technician of Informatics Skunkworks *Boise, ID*

- Improved image classification accuracy from 90% to 97% and reduced classification time by 20%
- Classified over 500 nanostructure images taken from atomic force microscopy
- Developed and trained convolutional neural networks with Python to scan and identify quantum dots within an image
- Using built-in MATLAB functionalities to replicate the experiment in papers in microscopic image detection
- Attended the progress workshop and presented semester-long progress slides to BSU and UW-Madison researching teams