

# Jiayu Liu

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## EDUCATION

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### New York University

*Master of Science in Computer Engineering, GPA 3.5/4.0*

*Sept. 2022-May 2024*

*New York City, NY*

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

### Boise State University

*Bachelor of Science in Computer Science, GPA 3.7/4.0*

*Aug. 2018-May 2022*

*Boise, ID*

- **Courses** : Data Structures, Intro to System Programming, Design and Analysis of Algorithms, Agile Development, Operating Systems, Digital Systems, Microprocessors, Network Security and Defense, Discrete Math, 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

## PROJECT/RESEARCH

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### Augmented Library

*Vertically Integrated Projects*

*Jan. 2023-Present*

*New York City, NY*

- Utilizing React for the frontend, Django for the backend, and PostgreSQL for the database to develop a full stack application.
- Constructing APIs for various users, books, and room reservations to enhance functionality and user experience
- Implemented Docker containers to encapsulate the full stack application, facilitating ease of distribution and development across the team.
- Leading a sub-team for API development, coordinating with the backend leader to provide weekly progress reports and plan next steps.

### New Hire Onboarding Application

*Sponsored Capstone Project with Micron Technology*

*Jan. 2022-May 2022*

*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

*Undergraduate Research Technician of Informatics Skunkworks*

*Jan. 2021-Jan. 2022*

*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

## WORKING EXPERIENCE

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### Institute for Pervasive Cybersecurity, Boise State University

*Cybersecurity Analyst*

*Oct. 2021-May 2022*

*Boise, ID*

- Monitored client networks and computer systems to prevent, detect, and investigate security breaches using Stellar Cyber
- Followed documented standard operating procedures and provided recommended updates on procedures as needed
- Applied critical thinking skills to security event data and determined the likelihood of possible attacks
- Self-directed research on topics such as Spring4Shell 0-day vulnerability
- Self-directed research on better utilization of the tools like Stellar Cyber that are used in the workflow

## TECHNICAL SKILLS

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**Languages:** Java, JavaScript, Python, SQL, C, HTML/CSS

**Tools/Frameworks/Libraries:** Springboot, Django, React Native, React, Git, Heroku, Docker, Postman, MySQL, Gradle