

# Rabi Alaya

319-594-6110 | [rabi-alaya@uiowa.edu](mailto:rabi-alaya@uiowa.edu) | [github.com/ra397](https://github.com/ra397) | [linkedin.com/in/ralaya](https://linkedin.com/in/ralaya)

## EDUCATION

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### University of Iowa

Iowa City, IA

*BSE in Computer Science and Engineering, Minor in Mathematics*

*Graduation Date: May 2025*

**Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Embedded Systems, Database Systems, Software Engineering Languages and Tools, Communication Networks, Intro to AI and Machine Learning.

## EXPERIENCE

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### Software Developer

Jun 2024 – Present

*University of Iowa College of Public Health, Department of Epidemiology*

*Iowa City, IA*

- Developed and deployed a GUI application in C# using the WPF framework to support data annotation for a research study on youth cycling safety behavior involving 170+ participants and a team of 15 researchers.
- Leveraged agile methodologies to deploy regular updates every 1-2 weeks, adapting the application to continuously meet evolving research objectives based on feedback from annotators.
- Enhanced the CRUD operations by developing a feature that enabled users to update their selections post-annotation, enhancing flexibility for the annotators.
- Resolved critical bugs related to video, audio, and CSV export functionality, improving the user experience and the accuracy of exported data for analysis.

### IT Intern

Aug 2023 – Dec 2023

*Altorfer CAT*

*Cedar Rapids, IA*

- Provided tech support for hardware and software issues, assisting non-technical users across the organization.
- Troubleshoot network issues, gaining hands-on experience with networking protocols and concepts.
- Collaborated with infrastructure and desktop support teams to escalate and resolve complex issues.
- Created detailed documentation for troubleshooting procedures and user guides to streamline future support.

### Network Engineer Intern

Jan 2023 – Aug 2023

*University of Iowa Health Care Information Systems*

*Iowa City, IA*

- Supported network engineers in managing a Cisco-based network with 600+ switches and 3500+ access points
- Cleared equipment configurations and updated inventory records to ensure compliance and accurate tracking.
- Assisted a team of field engineers in a project overseeing the replacement of over 350 access points. Provided comprehensive guidance to ensure seamless upgrades.
- Surveyed and analyzed network data using Ekahau software, applying data-driven decision-making to enhance network performance.

## PERSONAL PROJECTS

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### Weight Rack Reservation System | *Ruby on Rails, HTML/CSS, PostgreSQL*

November 2022

- Developed a Ruby on Rails web app to manage gym rack reservations for university students.
- Utilized RESTful API design, MVC architecture, user authentication, and PostgreSQL for efficient data management.
- Implemented admin controls for real-time rack monitoring and dynamic adjustments.
- Achieved 75% test coverage through unit testing with RSpec and validated functionality with Cucumber.

### Text Similarity Calculator | *C++*

June 2023

- Utilized vectorization techniques to convert documents into numerical representations, excluding stop words.
- Implemented the cosine similarity algorithm to compute similarity scores between vectorized documents, providing the result to the user.
- Project adopted under a 2-clause BSD license by a third party to verify optical character recognition (OCR) software outputs, demonstrating real-world application.

## TECHNICAL SKILLS

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**Languages and Frameworks:** Java, Python, C#, Ruby on Rails, Django, HTML5/CSS3/JavaScript, React, RESTful APIs, OOP

**Tools and Platforms:** PostgreSQL, Git, Github, Jira, Postman, VS Code, Visual Studio, Heroku deployment

**Development Practices:** Agile, CI/CD, TDD (JUnit, RSpec), BDD (Cucumber)