

Rabi Alaya

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EDUCATION

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

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

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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

SmartDart | *Python, OpenCV, Raspberry Pi, JavaScript, Firebase Firestore*

November 2024 – Present

- Developing a computer vision-powered dart machine using Python, OpenCV, and Raspberry Pi for real-time automated scoring, with data stored in Firebase Firestore and displayed on a live interface.
- Building a JavaScript-based companion web app with Firebase Authentication and Firestore for remote multiplayer gameplay and detailed stat tracking.
- Received \$5,000 for the **Best Technology Award** at the Iowa Innovation Challenge.

Cupid's Algo | *HTML/CSS, Ruby on Rails, PostgreSQL, Python (scikit-learn), Heroku*

January 2024

- Developed and deployed a full-stack Valentine's matchmaking web app for UIOWA students, featuring email verification, data storage in PostgreSQL, and personalized match generation.
- Implemented a Python-based algorithm using scikit-learn to vectorize questionnaire responses and calculate cosine similarity, delivering personalized top 3 matches automatically via email.
- Deployed the application on Heroku for seamless user access.

TECHNICAL SKILLS

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, AWS S3

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