

## Mostafa Kamal

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### EDUCATION

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#### University of Massachusetts Amherst

B.S. Computer Science, Minor in Business, GPA 3.47

Year of Graduation: May 2023

**Coursework:** Data Structures & Algorithms, Software Entrepreneurship, Theory and Practice of Software Engineering, Computer Networks, Discrete Mathematics, Digital Forensics, Search Engine

### TECHNICAL SKILLS

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**Languages:** Python, Java, JavaScript, Ruby, C#, HTML, CSS

**Technologies/Frameworks:** Spring, Flask, React, React Native, Node.js, Next.js, MySQL, DynamoDB, JPA, GraphQL, Git

### EXPERIENCE

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#### Outlier AI | AI Trainer

February 2024 - Present

- Developed data science to machine learning prompts, addressing model response failures by refining or rewriting model responses
- Handled challenges such as multi-table joins, nested subqueries, and complex aggregations to extract relevant information
- Crafted prompts to induce flaws in model responses with a 93.58% success rate across topics from data structures to machine learning
- Provided coder instructions to the model for an advanced data-science project to guide the LLM to a correct output
- Collaborated with other reviewers to review other attempters' tasks to validate and rate for best quality tasks

### PROJECTS

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#### Weout Startup [🔗](#)

January 2024 - Present

Weout revolutionizes local event and location exploration with AI-driven, personalized recommendations

- Crafted a dynamic web application that incorporates animations and forms using React.js, Node.js, and Firebase
- Developed a dynamic feed integrating with the Node.js backend for showcasing users' posts and secured the application via 2FA
- Leveraged OpenAI and Google Places API to generate location suggestions in Python, tailoring them to user inputs and behaviors reducing average search time by 70%
- Worked collaboratively with other developers to help with overall system and database design

#### Full-Stack Elevation-Based Navigation System [🔗](#)

February 2023 - May 2023

Implemented a navigation system that utilizes elevation information, allowing for diverse types of elevation inputs

- Created a full-scale web app featuring a client-side react app integrated with the OpenStreetMap API and powered by a Flask backend
- Utilized A\* and Dijkstra to find the shortest path and desired elevation
- Compared runtimes, along with osmnx shortest path function, for consistency in evaluation metrics
- Conducted integration and unit tests to verify app readiness for deployment

#### Full-Stack Chat App [🔗](#)

May 2022 - November 2022

Developed a dynamic chat app with React and Spring Boot, supporting private and group chats

- Employed MVC design pattern in developing REST API for managing CRUD operations in the database and used JPA for executing SQL queries
- Encrypted and secured the messages sent between users via Spring security modules and created authentication services using JWT
- Used Websockets to handle dynamic browser and server communication for instant messages
- Built the application end-to-end, including client-side React application, backend Java Spring Boot application, and DevOps for building the app using the Maven plugin

### CERTIFICATIONS

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Machine Learning Specialization by Andrew Ng