Ahmed Mustapha

Email | (609) 785-8775 | GitHub | LInkedIn | Website

EDUCATION

PRINCETON UNIVERSITY

Princeton, NJ

Bachelor of Science in Aerospace Engineering

Expected graduation, May 2026

- Minor: Computer Science
- Relevant coursework: Intro to CS, Data Structures and Algorithms, Object-Oriented Programming, Software Design and Development, Introduction to Artificial Intelligence
- Extracurricular: NSBE, Scholars Institute Fellows Program, Princeton Rocketry Club, Princeton AI Club, ColorStack, CodePath

TECHNICAL SKILLS

Programming Languages: Python, HTML, CSS, React.js, Java, TypeScript, Refactoring, TDD

Frameworks and Libraries: PyTorch, TensorFlow, pandas, Numpy, Matplotlib, Flask, Bootstrap

Tools and Technologies: Git, UnitTest, AWS, RESTful API, Tkinter, MySQL, MongoDB, Web Applications

EXPERIENCE

JPMorgan Chase & Co

Remote

J.P. Morgan Software Engineering Virtual Experience on Forage Jan 2024

- Set up a local dev environment by downloading the necessary files, tools and dependencies.
- Fixed broken files in the repository to make web applications output correctly.
- Used JPMorgan Chase's open source library called Perspective to generate a live graph that displays a data feed in a clear and visually appealing way for traders to monitor.

Lyft Remote

Lyft Back-End Engineering Job Simulation on Forage

Jan 2024

- Completed the Back-End Engineering job simulation, taking over development of an unfinished project for the Lyft Rentals team.
- Drafted a UML class diagram representing a new reorganized architecture.
- Refactored a messy codebase inherited from another team to accurately reflect my new design.
- Implemented unit tests and added new functionality using test-driven development.

AWS Remote

APAC Solutions Architecture virtual experience on Forage

Jan 2024

- Designed and simple and scalable hosting architecture based on Elastic Beanstalk for a client experiencing significant growth and slow response times.
- Described my proposed architecture in plain language ensuring my client understood how it works and how costs will be calculated for it.

TECHNICAL PROJECTS

SEARCH ENGINE Github

- Developed a search engine with advanced query capabilities utilizing an inverted index to efficiently compute IDF values and improve search relevance.
- Implemented advanced tokenization techniques and the Levenshtein edit distance algorithm to enhance search accuracy and handle similar queries.
- Utilized TF-IDF for sophisticated ranking of search results, leading to more relevant search outputs.
- Developed an interactive graphical user interface (GUI) using Tkinter for seamless user interaction with the search engine.

Technologies: Python, Numpy, Tkinter, TF-IDF, Inverted Index, Levenshtein Distance.

PASSWORD MANAGER APP GitHub

- Developed a secure Password Manager application using Python and Tkinter library.
- Enables users to store and manage passwords for various websites and services conveniently.
- Features labeled entry fields for website, email/username, and password, offering essential functionalities like password saving, retrieval, and an integrated password generator for enhanced data security.

ADDITIONAL INFORMATION

Languages: Arabic(limited proficiency), Hausa, Mossi, Twi, Kiswahili (limited Proficiency) **Interests:** Big Data | AI/ML | Internet of Things | Aerospace | Swimming | FPV drone flying