# 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