

Rafee Adnan

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EDUCATION

- **Purdue University | B.S. in Computer Science** Aug 2021 - May 2024
 - **Relevant Coursework:** Analysis of Algorithms, Data Structures and Algorithms, Machine Learning, Relational Databases, Systems Programming, Competitive Programming

EXPERIENCE

- **Software Engineering Intern** Remote
Transamerica May - Aug 2023
 - Utilized the OpenAI API to lead the development of a transformative Transamerica-GPT initiative, aiming to enhance employee productivity through an advanced chatbot equipped with conversational memory
 - Developed versatile converters for HTML, PDF, and XLSX file formats, enabling efficient indexing of the S3 bucket document information by the chatbot
 - Developed a RESTful API in Python utilizing AWS Lambda and Gateway, which enabled communication between a webpage and backend services
 - Integrated the API with S3 buckets and DynamoDB databases to facilitate seamless interactions with the interface

PROJECTS

- **Bayer Yield Prediction** Purdue Data Mine
Undergraduate Research Aug - Dec 2022
 - Analyzed over 2,900 genetic markers and 1,400 environmental factors to predict crop yield, using data from 1 million records split into two clusters
 - Enhanced model performance by integrating environmental features, boosting the adjusted R-squared from 0.1 to 0.67, and validated the improvement through k-fold cross-validation
 - Developed, trained, and optimized various machine learning models, including Ridge, Lasso, and Random Forest
- **Task Manager** Systems Programming
System Information GUI Application Dec 2023
 - Developed a system monitoring application in C by utilizing Qt-5 Creator and the proc filesystem
 - Implemented functionalities for viewing, controlling, and analyzing individual processes, including options for terminating, suspending, and exploring memory maps and open files
- **myShell** Systems Programming
Custom Command Line Interface Oct 2023
 - Developed a custom shell interpreter in C/C++ featuring wildcard expansion via regex, environment variable management, and shell/subshell execution via pipes and execvp
 - Implemented command parsing and execution using Lex and Yacc, including zombie process management, and command line argument if-statements
- **Sprachen Karte** Independent Research Project
Language Map Website Jun 2024
 - Developed a dynamic global map visualization using JavaScript and the AmCharts 5 API, categorizing languages by status (institutional, stable, endangered, extinct)
 - Utilized BeautifulSoup to extract and compile data on over 7,000 languages from Ethnologue into JSON format

CERTIFICATIONS

- **AWS Cloud Practitioner Certification** Jul 2024
CLF-C02
- **JPMorgan Chase & Co Certification** Jan 2022
Software Engineering Virtual Experience
 - Utilized stock price data feed to implement a way to display data visually for traders

SKILLS

- **Programming Languages:** Java, Python, PostgreSQL, C++, C, UNIX, JavaScript, Typescript, ROS, R
- **Libraries and Frameworks:** Pandas, TKinter, Pygame, Springboot, Javalin, React, BS4, TensorFlow, Keras, NumPy, OpenAI, OpenCV, Chart.js, Node.js
- **Tools:** AWS, VSCode, IntelliJ, DBeaver, Postman, Qt 5, Office 365, Agile Methodologies