

# Rafee Adnan

Portfolio: rafee.app  
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## EDUCATION

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

## EXPERIENCE

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- **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 Orchestrator, which enabled communication between a webpage and backend services
  - Integrated the API with S3 buckets and DynamoDB databases to facilitate seamless interactions with a chatbot interface

## PROJECTS

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- **Task Manager** Systems Programming  
**System Information GUI Application** Dec 2023
  - Developed a system monitoring application akin to Windows Task Manager or Linux System Monitor, utilizing the proc filesystem and Qt 5 for a graphical interface
  - Implemented functionalities for viewing, controlling, and analyzing individual processes, including options for terminating, suspending, and exploring memory maps and open files
- **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
- **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 Python and BeautifulSoup (BS4) to scrape and compile data on over 7,000 languages from Ethnologue's global language data into a JSON format

## CERTIFICATIONS

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- **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
  - Using JPMorgan Chase frameworks, JavaScript, Python, and Typescript

## SKILLS

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- **Programming Languages:** Java, Python, C++, C, JavaScript, C, UNIX, SQL, ROS, R
- **Tools and Skills:** AWS, VSCode, IntelliJ, Qt 5, Pandas, TKinter, Pygame, TensorFlow, Keras, NumPy, OpenAI, OpenCV, Agile, Office 365, Chart.js, Node.js