

# Rafee Adnan

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## EXPERIENCE

### Software Engineer

Sep 2024 - Present

CBRE Group | *Remote*

- Spearheaded the automation of a weekly ETL data pipeline in Python for a leading retail client, saving 5+ hours per week and improving efficiency
- Deployed updates and migrations for SIMMS mapping platform websites, serving 430+ clients, using Spring Boot for backend services and Git for version control, while adhering to CI/CD best practices.
- Developed and modified PostgreSQL queries to enhance site reports, improving data accuracy and usability

### Software Engineering Intern

May 2023 - Aug 2023

Transamerica | *Remote*

- Utilized 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

### Prediction Undergraduate Researcher

Aug 2022 - Dec 2022

Bayer | *West Lafayette, IN*

- 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

## EDUCATION

### Bachelor of Science in Computer Science | Purdue University

Aug 2021 - May 2024

*Relevant Coursework: Analysis of Algorithms, Data Structures, Relational Databases, Systems Programming*

## PROJECTS

### Sprachen Karte

Jun 2024

Language Map Website | *Independent Research Project*

- 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

### Task Manager

Dec 2023

System Information GUI Application | *Systems Programming*

- 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

## CERTIFICATIONS

### AWS Cloud Practitioner Certification (CLF-C02)

Jul 2024

### JP Morgan Chase & Co Certification (SWE Virtual Experience)

Jan 2022

## SKILLS

**Languages:** Java, Python, PostgreSQL, C++, C, UNIX, JavaScript, Typescript, R

**Libraries and Frameworks:** Spring Boot, React, BS4, NumPy, Pandas, OpenAI, Tkinter, OpenCV, Pygame, Chart.js, Node.js