Devang Jayachandran

in linkedin.com/in/this-is-devang/
github.com/jdevang

📞 +1 (973) 738 0746
✉ devang.j1998@gmail.com

WORK EXPERIENCE

Graduate Research Assistant
Penn State Harrisburg

01/2023 – 05/2024
Middletown, PA

- Developed REST APIs to enable seamless integration of the **GPT-3** and **GPT-4** APIs
- Implemented python scripts to automate data collection, sanitization, and analysis using beautifulsoup and sklearn
- Created metrics to increase general accuracy to **95%** during prompt generation of code using Gen AI
- Successfully planned and organised large scale programming events with over **150 participants**.

Software Engineer and Data Analyst
JP Morgan Chase & Co.

01/2020 – 07/2022
Bengaluru, India

- Designed aggregate NLP model frameworks and NER models and developed scalable REST APIs in Python and Java to leverage them.
- Refactored legacy code architecture to reduce runtime by **98%**, and successfully migrated a large scale monolithic project to a serverless AWS architecture based on Lambda.
- Designed deployment pipelines for CI and CD of services using Jenkins and Terraform
- Created monitoring dashboards for APIs and services using Splunk, Datadog, Cloudwatch, and Apigee
- Implemented secure auth of applications by integrating ADFS, EPV, and X.509 certificates with internal modules.

EDUCATION

Master of Science in Computer Science
Pennsylvania State University

05/2024
Pennsylvania

Bachelor of Engineering in Information Science & Engineering
The National Institute of Engineering

07/2020
India

PROJECTS

A Large Language Model Pipeline to Automate the Solution of Programming Problems
Python, GPT-4, APIs

12/2023

- Proposed a pipeline to streamline the ability of GPT4 to solve complex contest programming problems.
- Explored the effect of minor variations in system prompt and temperature for code generation and code accuracy.
- Achieved **25%** increase in code generation accuracy versus vanilla GPT-4 and **45%** versus vanilla GPT-3.
- Synthesized a system to iteratively correct code syntax using generated input scenarios.

Distributed Messaging Application in Golang
Golang, Linux, Docker, SQL, reactJS

05/2023

- Designed a multi-threaded distributed messaging application utilizing a master-minion architecture.
- Deployed a multi-node instance of the application capable of auto node-registration and generation.
- Generated pipelines to facilitate automated SSL certificate and endpoint generation.

PUBLICATIONS & PATENTS

- A Large Language Model Pipeline to Automate the Solution of Competitive Programming Problems – April 2024 — To be published in the Spring 2024 ASEE Mid Atlantic Section Conference

- Leveraging Generative Artificial Intelligence to Broaden Participation in Computer Science – May 2024 — Published in the AAAI 2024 Spring Symposia

- An Analysis of the Impact of Advances in Generative Artificial Intelligence on Programming Assignments and Competitions – April 2023 — Published in the ASEE Zone 1 Conference Spring 2023

- Method and System for Tabular Information Extraction – May 2022 — USPTO Patent Granted

TECHNICAL SKILLS

Languages: Golang, Python, Java, C++, SQL and NoSQL, JavaScript, HTML and CSS, Groovy, Shell scripting
Frameworks: Flask, JUnit, Material-UI, Svelte-kit, Tailwind
Developer Tools: Git, Docker, GCP, AWS, Jenkins, Terraform, Splunk, Datadog, Apigee, Android Studio, Postman
Libraries: pandas, NumPy, Matplotlib, sklearn