Rutuja Mandapmalvi

Seattle, WA, US | 206 861 96 30 | rutujm@uw.edu | LinkedIn |rutuja-mandapmalvi.info| GitHub

Education

University of Washington, MS Computer Engineering (GPA:4.0)

- Expected graduation: August 2026 • Coursework: Tiny ML(SP25), Advanced Data Structures And Algorithms, Introduction to Database Systems, Introduction to Machine Learning September 2018 - April 2022
- **University of Pune**, Bachelor of Computer Engineering (GPA: 3.6)
- Coursework: Software Computing and Optimal Algorithm, Software Testing and QA, Software Engineering and Project Management

Relevant Experience

Accenture, Packaged App Development Analyst

• Engineering scalable RESTful APIs and microservices for a mission-critical sustainability-focused buyer-supplier platform using Node.js and Express.js.

May 2024 - September 2024

January 2022 - March 2024

github.com/rutuja/f1gpt

- Refactored a semi-monolithic service into well-defined microservices by restructuring API payloads for domain-specific updates (buyer, supplier, stakeholder), improving maintainability and reducing deployment overhead.
- Authored clear, client-facing technical documentation and reports, supporting stakeholder alignment and faster adoption of API features.

Persistent Systems Limited, Software Engineer

- Designed high-reliability API integrations in IBM AppConnect using Node.js, driving real-time data sync across multiple enterprise platforms.
- Championed CI/CD adoption by developing Jenkins pipelines and GitHub Actions workflows, increasing deployment frequency and reducing integration issues.
- Designed comprehensive unit test coverage (90%+) for core CRUD modules, resulting in a 30% drop in production defects and greater deployment confidence.
- Partnered with product managers and cross-functional stakeholders to translate business goals into data-driven technical solutions, ensuring product delivery aligned with user needs and system scalability.
- Delivered refactoring of a legacy ReactJS file-generation platform, achieving a 25% reduction in processing time and accelerating stakeholder deliverables.
- Acted as cross-functional liaison during agile ceremonies, leading sprint planning, client demos, and knowledge transfer sessions to drive transparency and shared understanding.

Skills

Programming Languages: Python (data pipelines, scripting), JavaScript (frontend and backend), SQL (data modeling, performance tuning)MySOL

Frameworks Libraries: Node.js, Express.js, React, TensorFlow, Keras, PyTorch, scikit-learn, Pandas, NumPy Cloud and Infrastructure: AWS (EC2, S3, Lambda, IAM), DataStax, IBM AppConnect, Jenkins, Git, GitHub API Management and Integration: RESTful APIs, CRUD operations, API testing (Postman), OpenAI API, IBM AppConnect Development Tools Methodologies: Postman, JIRA, Git (version control), Agile development practices **Additional Projects**

Fine tune DeepSeek

- Fine-tuned DeepSeek for domain-specific language modeling to improve task-specific AI performance.
- Utilized PyTorch, GPU acceleration, and Hugging Face libraries to refine model performance on custom datasets.
- Evaluated model output using accuracy metrics to enhance text generation quality.

F1-gpt, chatbot for F1 motorsport

- Developing F1 GPT chatbot using OpenAI's text-embedding-3-small model to generate accurate and relevant responses to F1 motorsport queries.
- Leveraging DataStax for managing and querying a custom dataset to provide dynamic responses.
- Scraping data from multiple F1 webpages, structuring it into a cohesive dataset for efficient retrieval and use by the chatbot. Pregsys
- Analyzed Infant Mortality Rate (IMR) using National Family Health Survey (2015–16) data to evaluate maternal care impact.
- Performed data cleaning and preprocessing with Pandas for accuracy and consistency.
- Employed a multiple regression model to assess the relationship between IMR and various maternal care factors.
- Conducted data visualization for key insights, effectively presenting findings through charts/graphs that highlighted trends.

Food Calories Estimation Using Image Processing

- Applied feature extraction techniques to capture essential characteristics from food images, such as color and size, ensuring accurate classification of food items with an accuracy rate of 95%.
- Utilized Convolutional Neural Networks (CNN) for feature extraction and classification, achieving a classification accuracy of 95% on the test dataset.
- Performed accuracy and loss visualization using matplotlib to understand the model's performance during training.