Devdutt D Thakkar

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Education

Arizona State University - 3.33 GPA August 2023 – May 2025
Master of science in Computer Science *Tempe, AZ*

Pandit Deendayal Energy University - 3.76 GPA August 2019 – May 2023
Bachelor of Technology in Information and communication technology *Gujarat, India*

Experience

Teaching Assistant August 2024 - Present
Arizona State University *Tempe, AZ*

- Led lab sessions and recitations for CSE 110, focusing on core Java concepts, hands-on debugging practices, and guiding students through step-by-step problem-solving methods in a classroom setting.
- Coordinated and streamlined the grading of programming assignments and exams, ensuring accuracy and efficiency, while handling grading-related issues using tools like grading scripts or platforms.
- Offered direct support to 225 students, assisting with code reviews, debugging, and technical queries, while maintaining effective communication and problem resolution.

Data Science Intern June 2022 – May 2023
SculptSoft Pvt. Ltd. *Ahmedabad, India*

- Developed deep learning models for stock market prediction, utilizing TensorFlow and Keras to enhance model accuracy by 33.3%. Implemented LSTM networks to capture temporal dependencies, improving short-term forecasting.
- Engineered and maintained factual dashboards for real-time monitoring, leveraging software tools - Tableau and Power BI, resulting in a 25.23% improvement in Parametric visualization efficiency.
- Implemented a Natural Language Processing (NLP) sentiment analysis model using Hugging Face's Transformers to analyze financial news, improving prediction accuracy by 17%.
- Integrated AWS S3 for scalable data storage and utilized Docker for containerized deployments, reducing infrastructure costs by 20%.

Software Developer Intern March 2022 – April 2022
TalentServe *Mumbai, India*

- Automated CI/CD pipelines using Jenkins and managed containerized applications with Docker, leading to a 35% reduction in deployment time.
- Leveraged AWS S3 for secure data storage and Google Cloud Platform for scaling backend services, reducing operational costs by 20% and managed project documentation and issue tracking with Jira and Confluence.
- Developed RestAPIs in Flask utilizing NLP to dynamically ask users mental health-related questions, generate follow-up questions based on responses (capped at 10), and integrated it into the project.

Projects

Real-time Sentiment Analysis on The Fabric Testbed September 2023 – December 2023

- Collected and pre-processed data from Kaggle, converting to data packets for distributed processing across multiple servers.
- Created a multi-server architecture with load balancing, where each server performed different machine learning tasks, then aggregated results on the client side.
- Ensured efficient data transmission and fault tolerance using TCP/IP protocols for real-time insights to the user.

Enhancing Question Generation with Novel Reward Functions September 2023 – December 2023

- Guided the development of NLP-based models for question generation, leveraging novel reward functions to enhance accuracy and precision by 22.5%.
- Implemented reinforcement learning techniques to refine question relevance and coherence based on user interactions.
- Optimized model performance through iterative training and hyperparameter tuning.

Technical Skills

Languages: Java, Python, C#, C/C++, SQL, JavaScript, HTML/CSS
Frameworks & Libraries: Flask, React, Redux, Node.js, NLTK, TensorFlow, Scikit-learn, OpenCV, Pandas, NumPy
Databases: PostgreSQL, MySQL, Firebase Database, Oracle, MongoDB, DynamoDB
Developer Tools & Platforms:VS Code, IntelliJ, Eclipse, Power BI, Tableau, Git, GitLab, Jenkins, Docker, Jira, Confluence
Cloud Platforms/Services: AWS, Google Cloud Platform (GCP), Firebase, IBM Cloud

Publications

Application of Remote Sensing in Smart Agriculture Using Artificial Intelligence 2022