Khushi Doval

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Education

CONCORDIA UNIVERSITY 2023-2025
Master's in Applied Computer Science
GPA: 3.4/4.3
Relevant Coursework: Applied Artificial Intelligence, Advanced Programming Practices, Analysis and Design of Algorithms

DR. SHAKUNTALA NATIONAL REHABILITATION UNIVERSITY 2019-2023
Bachelor of Technology in Computer Science
GPA: 8.5/10
Relevant Courses: Machine Learning, Object-Oriented Programming with Java, Programming with Python

Relevant Skills

Programming Languages: Python, Java, SQL
Frameworks & Tools: Excel, TensorFlow, Keras, Scikit-Learn, PyTorch, Pandas, NumPy, Flask, Docker, Git, PostgreSQL, AWS (ECS, EC2, S3), Matplotlib, Seaborn, Plotly
Technologies: Machine Learning, Data Visualization, Object Oriented Programming, Version Control, Containerization
Certifications: Python for Data Science and Machine Learning (Udemy), Data Scientist Associate (Datacamp)
Languages: English (Advanced), French (in progress), German (Intermediate), Hindi (Advanced)
Soft Skills: Analytical Thinker, Solution Oriented, Strong Team Collaborator

Relevant Career Experience

Traffic Sign Recognition with Computer Vision

- Led development and fine-tuning of 9 CNN models including ResNet18 and VGG16 Transfer Learning models.
- Achieved high accuracy rates, surpassing 98% accuracy with ResNet18 and VGG16 Transfer Learning models.
- Conducted in-depth analysis of GTSRB, RSD, and CTS datasets, managing over 20,000 images and 34 classes, optimizing preprocessing for model compatibility.
- Implemented hyperparameter optimization, enhancing model accuracy through PyTorch and cutting-edge techniques.
- Visualized model predictions using t-SNE to understand the network's ability to categorize traffic signs accurately.
- Spearheaded ablative study on hyperparameter adjustments, revealing direct correlation with model performance, guiding strategic decisions for optimization.

Book Recommendation System on AWS ECS/EC2

- Developed and deployed a scalable book recommendation web app on AWS ECS/EC2 with Docker, ensuring high availability through clusterization on multiple EC2 instances and showcasing expertise in distributed systems architecture.
- Implemented advanced recommendation algorithms (cosine similarity, content-based filtering) for personalized suggestions.
- Optimized resource usage by 5% on AWS ECS and managed AWS infrastructure, including S3.
- Streamlined development and deployment with Flask, showcasing expertise in ECS, EC2, S3, and Docker.

Warzone Game Development

- Developed an efficient, object-oriented, and modularized Java-based Warzone game.
- Implemented time and space-efficient algorithms for optimal game performance, applying MVC architecture and Java design patterns.
- Collaborated effectively with team members, ensuring successful delivery of a fully functional game.
- Implemented design patterns including the State Pattern for managing game states seamlessly, the Strategy Pattern to dynamically adjust behaviors based on player strategies, and the Command Pattern to encapsulate game commands and actions, fostering code reusability and maintainability.
- Employed Git for CI/CD pipeline to maintain software quality and streamline development processes.

MeBot- Emotion Based Song recommender chatbot

- Led end-to-end development of "MeBot" emotion-based chatbot, integrating emotion analysis technology with ANNs and natural language processing with NLTK.
- Utilized AJAX requests and JSON data parsing for efficient data interchange.
- Implemented a RESTful API to facilitate seamless communication between MeBot and external applications.
- Developed the web application using HTML, CSS, JavaScript and Python and deployed with Flask.