Khushi Doval

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Technical Skills

Programming Languages: Python (Pandas, NumPy, Scikit-Learn), SQL, Java
Data Analysis and Visualization: A/B Testing, EDA, Statistical Modeling, Matplotlib, Seaborn, Plotly
Machine Learning and AI: TensorFlow, Keras, PyTorch, Scikit-Learn
Databases and Cloud: PostgreSQL, AWS (ECS, EC2, S3), Docker
Tools: Excel (Pivot Tables, VLOOKUP),Git, Jupyter Notebook, Google Colab
Certifications: Python for Data Science and Machine Learning (Udemy), Data Scientist Associate (Datacamp)
Languages: English (Advanced), French (Beginner), German (Intermediate), Hindi (Advanced)
Soft Skills: Analytical Thinking, Problem-Solving, Collaboration, Communication

Experience

Concordia University **February 2025 – April 2025**
Graduate Teaching Assistant *Montreal, QC*

- Graded and provided feedback on 40+ assignments and exams, maintaining 100% accuracy and reducing grading turnaround time by 20% through efficient workflow
- Mentored 50+ students, resulting in a 15% improvement in average exam scores and a 10% increase in class participation.
- Support students' understanding of complex networking concepts through clarifications and discussions.

Projects

Traffic Sign Recognition (Computer Vision) | *Python, PyTorch, NumPy, Pandas, Seaborn* **March 2024**

- Developed and fine-tuned 9 CNN models, achieving 96% accuracy and reducing training time by 25% through hyperparameter optimization.
- Performed exploratory data analysis (EDA) on 20,000+ images across 34 classes (GTSRB, CTS datasets), optimizing preprocessing for model compatibility.
- Cleaned and preprocessed data to prepare it for model d, ensuring high-quality data for training.
- 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.

Book Recommendation System | *AWS (ECS, EC2, S3), Docker, Python, Flask* **December 2023**

- Deployed a scalable book recommendation system on AWS ECS/EC2, handling 1,000+ concurrent users with 99.9% uptime and reducing deployment time by 40% using Docker.
- 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 | *Java, Github, Eclipse* **November 2023**

- 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.
- Employed Git for CI/CD pipeline to maintain software quality and streamline development processes.

MeBot- Emotion Based Song recommender chatbot | *Python, TensorFlow, HTML, CSS, JavaScript* **January 2022**

- 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.

Education

Concordia University **September 2023 – December 2025**
Master's in Applied Computer Science *Montreal, QC*

Dr. Shakuntala National Rehabilitation University **August 2019 – August 2023**
Bachelor of Technology in Computer Science *Lucknow, UP*