AGIT YESILOZ

Aspiring Machine Learning Engineer

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GitHub
https://github.com/ayesiloz1

Portfolio
https://ayesiloz1.github.io/Portfolio/

Experience

Coastal Carolina University

AI/ML Research Assistant   *06/2024 – Present.*

- Built a convolutional autoencoder for anomaly detection on manufacturing datasets, achieving a 96% defect detection rate.
- Developed an interactive PyQt5 GUI to visualize anomalies with dynamic heatmaps, ROI selection, and threshold controls.
- Implemented data augmentation techniques and GPU acceleration, reducing model training time by 60%.
- Utilized InstanceNorm2d and LeakyReLU in the encoder and decoder for improved stability, with a final Tanh layer image reconstruction.
- Built a comprehensive evaluation pipeline, including confusion matrices and CSV-based anomaly result exports for analysis.

Lulu's North Myrtle Beach

Server Crew Captain   *07/2022 – Present.*

- Managed a team of 30+ servers, demonstrating leadership and efficiency in a fast-paced work environment.

Education

Coastal Carolina University

Computer Science | GPA: 3.25 / 4.0

- Developed and applied models using Scikit-Learn, TensorFlow, and PyTorch, focusing on classification, anomaly detection, and model interpretability.
- Proficient in Python, with extensive experience in data manipulation (Pandas), visualization (Matplotlib), and algorithm implementation.
- Strong understanding of data structures (e.g., arrays, trees, graphs) and algorithm design, especially for optimizing machine learning models.
- Implemented parallel processing techniques to improve the efficiency and speedup of computations by using C programming language with threads, MPI, etc.

Skills

- *Programming Languages:* Python, C, C#
- *Machine Learning:* PyTorch, Scikit Learn, TensorFlow, *AWS Sagemaker.*
- *Deep Learning Techniques*: Convolutional Autoencoders, Grad-CAM, Hyperparameter Tuning
- *Database Management:* MySQL, MongoDB
- *High-Performance Computing:* CUDA, OpenMP, MPI, Pthreads

Relevant Coursework

- Applied Machine Learning: Developed an anomaly detection model for welding data using Scikit-Learn, focusing on classification and predictive modeling techniques.
- Python Programming I-II: Gained proficiency in Python programming and mastered essential data science libraries, including Pandas, NumPy, and Matplotlib.

Summary

Aspiring Machine Learning Engineer with hands-on experience in developing and deploying ML models, specializing in anomaly detection, predictive analytics, and model interpretability. Skilled in Python, PyTorch, TensorFlow, and data visualization, with proven success in optimizing model performance by leveraging GPU acceleration. Accepted into Georgia Tech's MS in Machine Learning (Spring 2025).