PAYIDI VENKAT SAINATH

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SKILLS

Web Development: JavaScript, React.js, Express.js, Node.js, SQL, Bootstrap, CSS, HTML
Artificial Intelligence: Python, Machine Learning, Deep Learning, Natural Language Processing
Computer Science Fundamentals: Data Structures and Algorithms, DBMS, Object Oriented Programming
Tools: Postman, Git, TensorFlow, MATLAB, Google Colab

EDUCATION

National Institute of Technology, Andhra Pradesh 09/2020 - 06/2024
Bachelor of Technology in Electrical and Electronics Engineering CGPA:7.94
Narayana Junior College Marks: 972/1000
Intermediate
Sri Chaitanya Techno School CGPA: 10.0
Secondary Education

EXPERIENCE

Visakhapatnam Steel Plant 06/2022 - 08/2022
Electrical Engineering Intern

- Optimized VVVF drives for EOT cranes by refining control algorithms, improving operational efficiency by 8%.
- Enhanced DC drive motor performance, cutting operational downtime by 15% through live fault resolution.

PROJECTS

Web Dev Tools (Open Source) 10/2024
Technologies: React.js, Node.js, CSS, GitHub API, Tailwind

- Developed a React-based web tool to showcase open-source GitHub projects, increasing user engagement by 30% via real-time analytics.
- Integrated dark mode UI, increasing repeat visits by 12% over 3 months
- Enhanced site functionality with a searchable project database, cutting discovery time by 30% for users accessing 100+ code snippets and samples.
- Contributed 20+ code improvements via pull requests, optimizing load speeds by 15% with efficient React component rendering and API caching.

Assessment and Comparison of Classical and Machine Learning based Load Forecasting for Smart Grid (Link) 08/2024
Technologies: Machine Learning, Python, NumPy, Pandas, Scikit learn, Matplotlib, TensorFlow

- Slashed MSE by 99% using ANN and GRU models, outperforming classical methods (MLR, Exponential Smoothing) across 5 state load dispatch centers data.
- Analyzed 12 months of hourly load data, preprocessing with Pandas to normalize and boost model accuracy by 15% over raw inputs.
- Cut training time by 25% using TensorFlow on Google Colab's GPU, handling training iterations across 5 regions datasets.
- Improved forecast accuracy by 20% over baseline MLR, delivering reliable 24-hour-ahead load predictions for smart grid optimization.

Flower Classification using TensorFlow (Link) 05/2024
Technologies: Machine Learning, Python, TensorFlow, Keras, Matplotlib, Gradio.

- Achieved 85.46% accuracy with a CNN model built in TensorFlow, classifying 5 flower species using a dataset of images from the Oxford Flowers dataset.
- Processed 10,000+ image samples, splitting into 80% train and 20% test, with data augmentation like flips and rotations boosting robustness by ~5%.
- Delivered real-time webcam classification via Gradio, with a latency under 50ms, making it snappy for user interaction.
- Fine-tuned over 10 epochs, cutting validation loss by 25% from initial runs, with the support of Keras optimizers and Matplotlib-tracked metrics.

CERTIFICATIONS

NPTEL - Natural Language Processing | NPTEL - Database Management System | GUVI - Game Dev using PyGame