Riddhish Bonde

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GitHub Profile
LinkedIn Profile

Programming: Java, C/C+, Python
Machine Learning: TensorFlow, PyTorch, XGBoost, SVM, GANs, LSTMs, BERT, GPT, Q-learning
Web Development: React.js, Next.js, TailwindCSS
Databases: MongoDB, SQL
Tools: Docker , Git , Grafana , Hugging Face

PROJECT

FADE | Next.js, Tailwind CSS, Gemini AI, OpenAI API

- Built an open-source AI code generation platform that instantly transforms user prompts into working code with a live preview.
- Developed real-time code generation and editing features using Gemini AI models.
- Integrated an interactive workspace with live chat, AI-assisted editing, and instant deployment preview.

AI-Fault Tolerance System | Python, TensorFlow, ZeroMQ, Docker, Grafana

- Designed an AI-based fault-tolerant system simulating 3 independent nodes with real-time monitoring and prediction.
- Built a lightweight decentralized communication system using ZeroMQ and implemented a TensorFlow model for real-time fault detection and recovery.
- Integrated Grafana dashboards via Telegraf and InfluxDB for real-time system visualization.

SpaceSage | React, TypeScript, Python, TensorFlow, Flask

- Developed an advanced astronomy analysis toolkit for Galaxy Classification, Redshift Analysis, Exoplanet Habitability, and Satellite Orbit Optimization.
- Built a CNN model achieving 82.56% accuracy for galaxy image classification using the Galaxy10 dataset.
- Implemented Redshift analysis (Random Forest), Exoplanet Habitability models (atmospheric data), and Orbit classification (BERT-based NLP models).
- Full-stack integration with React frontend and Flask backend for ML model deployment.

EXPERIENCE

Research intern

Centre for nanotechnology and VLSI design

June, 2024 – July, 2024
Project: ZyNet: A Automated Deep Neural Network over Risc-V Architecture

- Designed a DNN on Zynq boards by integrating ZyNet (Python) with Vivado for MNIST classification.
- Built and tested neural architectures (input, hidden, output layers) using ReLU activation.
- Developed ZyNet implementation over RISC-V processors for AI-based IoT manufacturing.
- Created Verilog modules (Neuron, Layer, Max Finder) and validated through simulation.
- Achieved FPGA deployment with optimized performance, area, and power specs.

EDUCATION

Vellore Institute of Technology Chennai, India
Bachelor of Technology in Computer Science
Aug. 2023– Present
CGPA- 9.38*(currently)*

CERTIFICATIONS

- **Supervised Machine Learning: Regression and Classification (Coursera)**
- **Advanced Learning Algorithms (Coursera)**