in LinkedIn
GitHub
Portfolio

Raj Pulapakura
Full Stack Machine Learning Engineer

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TECHNICAL SKILLS

- JavaScript | TypeScript | HTML | CSS | React.js | Next.js | GraphQL | Python | SQL | REST APIs | AWS Lambda
- AWS ECR | AWS EC2 | AWS API Gateway | AWS Dynamo DB | MongoDB | Node.js | Firebase | Git | GitHub | Docker
- TensorFlow | Keras | PyTorch | Scikit-learn | NumPy | Pandas | Matplotlib | Pyplot | OpenCV | ChromaDB | Langchain

PROFESSIONAL EXPERIENCE

Algorithm
Software Engineer, Intern   Jan 2023 - Present

- Designing and implementing interfaces and **APIs** with payments infrastructure using modern **web development technologies** including **Next.JS and JavaScript**, working on both **frontend** and **backend**.
- Developing **Python** scripts to process geospatial and agricultural data from **AWS S3 cloud** into reports.
- Engineering pipelines to log user activity through **AWS S3 and AWS API Gateway** for customer support.

PROJECTS

Image Search Engine

- Engineered a full-stack website with **Next.js/JavaScript** enabling users to easily find similar images.
- Implemented drag-and-drop functionality, a beautiful grid layout, and sidebar navigation and animation.
- Deployed a **PyTorch** computer vision model through a **REST API integration** backend built with **BentoML** and hosted using automated **Terraform** infrastructure for **AWS API Gateway** and **AWS Lambda**.
- Drove backend latency down by **20%** of baseline through optimization of model architecture.

Temperature & Power Consumption Time Series Forecasting Model kaggle

- Implemented univariate and multivariate time series models for temperature forecasting using **Python**.
- Achieved **30%** better performance than baseline (metric was Mean Absolute Error) by employing advanced machine learning techniques including 1-dimensional CNNs, extensive hyperparameter tuning, Adam optimizer, and exponentially decaying learning rate using **TensorFlow**.
- Utilized **NumPy**, **Pandas**, **Matplotlib** and **Pyplot** for data manipulation, cleaning, preprocessing, analysis, and visualization.

Footwear Ecommerce Website

- Developed a full-stack ecommerce website for footwear with **React.js/JavaScript** and **Material UI.**
- Features include account creation, full-text product search, and payments integration with **Stripe**.
- Built backend infrastructure to handle **API** requests and an authentication cache, using the powerful **backend** technologies **GraphQL** and **Redis**, and a database system with **MySQL** and **TypeORM**.
- Deployed the website using modern containerization technologies **Docker** and **AWS ECR**.

CERTIFICATIONS

- **Database and SQL for Data Science with Python,** IBM   Dec 2023
- **Deep Learning Specialization,** DeepLearning.AI   Dec 2023
- **Advanced Machine Learning on Google Cloud,** Google Cloud   Nov 2023
- **IBM Professional Machine Learning Certificate,** IBM   Sep 2023
- **TensorFlow Developer Certificate,** TensorFlow   Aug 2023

OTHER

- Active contributor to the open-source packages **TensorFlow** and **Scikit-learn**.
- Write a technical blog on **Medium** and post videos on **YouTube,** sharing my passion for AI/ML.