PRIYANK THAKKAR

Campbell, California 95008 | Mobile No: (669)-204-9044
Portfolio: plex-gr00t.github.io | Email: pthakkar16298@gmail.com | LinkedIn: linkedin.com/in/priyank-thakkar | GitHub: github.com/PLEX-GR00T

SUMMARY

A self-motivated Artificial Intelligence graduate from San Jose State University with strong competitive research and analysis aiming to leverage proven communication, teamwork, and management skills thereby bringing value to the table with high collaboration, analytical, written, and verbal communication abilities.

WORK EXPERIENCE

SJSU Research Foundation | Machine Learning Engineer | California | *Python, Docker, ROS, TensorFlow* **(Jan 2022 - May 2023)**

- Developed custom neural network models using TensorFlow to improve object detection accuracy by 15% over pre-trained models.
- Integrated the ZED Stereo Camera with ROS and Docker, reducing system latency by 20% and improving overall performance.
- Implemented a custom algorithm to process sensor data from 2D Lidar, Teensy board, IMU 6500, and ZED stereo camera with a 98% accuracy rate in obstacle detection and avoidance.
- Developed and implemented a novel algorithm that improved vehicle localization precision by 20% using 3D point clouds from a visual odometry stack, leading to a more accurate mapping in real-time.
- Computed 12 different state-of-the-art models for Traffic Signs dataset and optimized the speed of these models' training by 12% using Intel's integration for computation. Optimized the speed of inference by 10 times with INT8 scales of TensorRT.

Starlit Electronics | Machine Learning Engineer | India | *Kubernetes, Docker, AWS, Python, TensorFlow, Node.js* **(Sep 2019 - Aug 2021)**

- Collaborated with cross-functional teams to design and execute a successful proof-of-concept (POC) for the home security product, saving 10% on the total POC budget while delivering all required functionalities within the desired timeline.
- Developed and integrated machine learning algorithms to enable motion following and weapon detection features in a home security product prototype, resulting in a 15% increase in accuracy compared to existing products on the market.
- Innovated custom neural network architecture with a transfer learning approach, achieving a precision rate of 93% for the detection of multiple weapon types.
- Lead development for Natural Language Processing (NLP) initiative with chatbots and virtual assistants for home security applications.
- Used PySpark data frame to read text data, CSV data, and Image data from S3, cleaned the input text data using PySpark ML features exactions API, also used various algorithms of PySparkMLAPI.
- Performed data exploratory analysis, data visualizations, and feature selections using Python and Apache Spark.
- Developed a predictive model for product sales using logistic regression which accurately forecasted sales within 2% of actual figures, leading to increased profitability and better inventory management.
- Implemented a streamlined CI/CD pipeline for a NodeJS web application on Jenkins, utilizing GitHub integration and Docker hub deployment to reduce deployment times by 75%.
- Developed an automated Kubernetes cluster on AWS EC2 with auto-scaling and auto-healing capabilities, resulting in a 99.9% uptime.

EDUCATION

M.S. Artificial Intelligence | San Jose State University | California | 3.7/4.0 **(Aug 2021- May 2023)**
B.E. Computer Science and Engineering | Gujarat Technological University | India | 3.7/ 4.0 **(Jun 2016 - May 2020)**

SKILLS

Programming Languages: Python, R, Java, SQL, NodeJS, React.
Frameworks: TensorFlow, PyTorch, Keras, Pandas, NumPy, Scikit-learn, SciPy, NLTK, OpenCV, Matplotlib, Seaborn, Plotly, Spark.
Deployment: Kubernetes, Kubeflow, AWS, GCP, Docker Containerization, Streamlit.
Knowledge: Neural Networks, SVM, Regression, XGBoost, GBM, Clustering, Random Forest, Transformers, RNN, Attention mechanisms.
Developer Tools: MongoDB, BigQuery, CI/CD, Jenkins, JIRA, Agile, Git, Linux, Jupyter Notebook.

ACADEMIC PROJECTS

AI-based Exercise Tracking | *NodeJS, React, MongoDB, Python, AWS, Nginx, MoveNet, Docker, CI/CD* **|** https://youtu.be/BzTg0rpj904

- Trained 5 different exercise models to perform Human Pose Estimation on the user's video input using MoveNet and TensorFlow.js.

Machine Learning Pipeline Orchestration | *Python, Kubeflow, Kubernetes, TFX, GCP, TensorFlow, Docker*

- Built production-level Machine Learning infrastructure using TFX, Kubernetes, Kubeflow Pipelines, TensorFlow, and GCP to streamline the model training and deployment processes.

Natural Language Processing (NLP) Q&A Application | *BERT, Python, Streamlit, Haystack, Hugging Face, NLTK*

- Benchmarked 5 different BERT Q&A models from Hugging Face using a self-created dataset of 200 paragraphs and annotated 1000+ questions of SQuAD format using the haystack platform. Also performed OpenAI GPT model fine-tuning features.

Regression Model for Energy Usage Intensity (EUI) | *BigQuery, XGBoost, OneAPI, Python, Google Data Studio (GDS)*

- Analyzed tree-based regression models like CatBoost, LightGBM, and XGBoost to get the best results on 100K+ data points.
- Integrated BigQuery to project for performing live visualization dashboard of 76K data points utilizing Google Data Studio.