Amarsh Pedapati

 amarshp | in amarshp | ✉ amarsh.pedapati@gmail.com | 📱 +91-9959822444

EDUCATION

Indian Institute of Technology, Hyderabad　　　　　　　　　　　　　　　**Jul 2019 – May 2023**
Bachelor of Technology, ***Artificial Intelligence*** 　 **(GPA - 8.34)**　　　　　　　　*Hyderabad, India*

TECHNICAL SKILLS

Programming Languages: Python, C++
Frameworks & Libraries: PyTorch, Fastai, LangChain, Streamlit
Data Science Tools: Pandas, Numpy, Scikit-learn, Matplotlib
Cloud & Databases: AWS, Azure, Snowflake, DataBricks, Postgres, MySQL
AI/ML: Machine Learning, Deep Learning, Computer Vision, LLMs, Generative AI

WORK EXPERIENCE

Data Scientist | Blend360, Hyderabad, India　　　　　　　　　　　　　　**Oct 2023 – Present**

For America's Largest Retail Company

- Led customer segmentation for a holiday sales marketing campaign, targeting maximum response rates.
- Designed and implemented a highly efficient datamart for model training and scoring by optimizing SQL queries in a Spark environment, achieving a 7x increase in speed and a more compact structure compared to previous versions, which greatly enhanced data processing efficiency
- Engineered preprocessing code that accelerated runtime by 1000x, reducing processing time from days to 20 seconds without additional compute resources.
- Designed uplift models for incrementality testing (A/B testing) across three customer segments, achieving a 100% improvement in model lift and linearizing LIFT curves.
- Identified and corrected a critical error in the prior year's experiment using advanced probability calibration techniques.
- Built an experimental design model to effectively select 13.4M customers from a pool of 130M, ensuring statistical significance through power analysis.

For America's Leading Distributor of Specialty Construction Products

- Developed and implemented forecasting models at national, regional, and district levels, focusing on 12-quarter volume growth.
- Utilized over 100 variables from diverse economic, construction, and internal data sources to enhance predictive capabilities.
- Applied advanced techniques such as Prophet, XGBoost, and linear regression, emphasizing hyperparameter tuning and feature engineering (including variable decay, lags, moving averages, and year-over-year growth) to improve model accuracy and provide actionable insights.

Data Scientist Intern | AIBOD, Fukuoka, Japan　　　　　　　　　　　**Jan 2022 – June 2022**

- Addressed a critical issue in the object detection model for an unmanned cash register, where unknown items were misidentified, by conducting extensive experimentation with linear, polynomial, and machine learning-based thresholding techniques, resulting in substantial improvements in model accuracy.
- Conducted experiments with ML models to enhance binary classification accuracy in predicting misclassifications by employing data augmentation techniques

Data Scientist Intern | ManaliSwing, Manali, India　　　　　　　　　**Sept 2023 – Dec 2023**

- Developed a Computer Vision solution to detect the open/closed status of a carabiner for safety verification in a giant swing adventure setting.
- Curated and labeled images from diverse environments, performed extensive research on state-of-the-art models, and tested various camera setups at the giant swing location.
- Selected YOLO V5 for model implementation, incorporating live footage from a GoPro for real-time inference.
- Achieved 87% overall accuracy and 95% accuracy in detecting carabiner openness, with the model currently in deployment in Manali.