Sandeep Prasad

Bangalore, India | +91 7750943941
iamprasadsandeep@gmail.com

Summary

AI and Machine Learning professional with 6+ years of experience in Machine Learning, Generative AI, Deep Learning, and Time Series Analysis.

Skilled in managing full project lifecycles, from requirements gathering to model deployment in cloud environments.

Expertise in advanced algorithms like CNNs, RNNs, and Time Series models. Experienced in leading teams to deliver projects on time, within budget, and to best practices.

Passionate about mentoring teams to drive skill development and impactful results.

Experience

Deloitte | India, Bangalore
Data Scientist | 12/2020 - Present

Career Progression and Client Project Experience:

Started as a Data Science Developer and advanced to leading a team, delivering AI-powered solutions for a diverse range of clients.

Client Project Experience:

Project: Cash Reserve and P&L Forecasting

Client: Mars Inc.

Role: Data Scientist

Deliverables: Forecasted cash reserves and Profit and Loss using advanced time series and deep learning algorithms.
Methodology: Agile

Model Architecture: Supervised

Responsibilities:

- Collected raw cash reserve and balance sheet data from the Mars server.
- Preprocessed large volumes of data, including data cleaning and imputing missing values using PySpark.
- Analyzed internal and external factors, including micro and macroeconomic influences on the business, to generate accurate forecasts.
- Developed univariate and multivariate time series and deep learning models for forecasting cash reserves and P&L statements.
- Fine-tuned models to achieve a MAPE under 5%.
- Coordinated cross-functional communication to test and deploy the solution for client access.

Achievements:

- Optimized the forecasting pipeline, reducing production runtime by 70%.
- Reduced production costs by over 150% through optimization of computational resources.

Project: Sales Forecasting

Client: Lululemon Athletica

Role: Data Scientist

Deliverables: Developed a sales forecasting model for Lululemon.

Methodology: Agile

Model Architecture: Supervised

Responsibilities:

- Communicated with the client to gather requirements, managing both business and technical development as the sole data scientist from Deloitte.
- Designed the solution architecture and obtained sign-off from both business and client tech teams.
- Collected raw balance sheet data from the Lululemon server and preprocessed it using PySpark, including cleaning and imputing missing values.
- Analyzed internal and external factors, including micro and macroeconomic influences, to generate accurate forecasts.
- Developed and fine-tuned univariate and multivariate time series models, achieving a MAPE under 2%.
- Scaled the solution globally, achieving an average MAPE of 5%.
- Coordinated with various teams to test and deploy the solution, while transferring knowledge to the MLOps team for maintenance and development.

Achievements:

- Led the project as the sole data scientist, managing both client relationships and technical development.
- Delivered results beyond expectations, securing an additional $2.5M in business for Deloitte.
- Awarded Employee of the Quarter and received multiple client appreciations for the developed solutions.
- Packaged the solution framework as a Deloitte Tool, now leveraged for other clients.

Project: RAG Chatbot

Client: Lincoln Finance

Role: Lead Data Scientist

Deliverables: Created a RAG-based chatbot for the client. **Methodology:** Agile

Model Architecture: Large Language Model (AWS Bedrock)

Responsibilities:

- Communicated with the client to understand business requirements.
- Designed the architecture diagram and obtained sign-off from both business and client tech teams.
- Led a team of Data Scientists and Data Engineers to complete the end-to-end pipeline.
- Dockerized the solution and managed cross-functional communication for deployment on AWS cloud.
- Transferred technical and functional knowledge to the client's technical and functional teams.

Achievements:

- Successfully developed and deployed the RAG-based chatbot, improving client operations and reducing response time by 40%.
- Spearheaded the seamless integration of the solution into the client's existing systems, ensuring scalability and efficiency.
- Received recognition from the client for the innovative solution, leading to potential future collaboration opportunities.

Tata Consultancy Services (TCS) - Innovation Lab | India, Bangalore
Machine Learning Engineer | 10/2018 - 12/2020

Career Progression and Client Project Experience

Started as a Machine Learning Engineer after completing academics, gradually gaining comprehensive exposure to all stages of the Data Science project lifecycle, from data preparation to model deployment.

Client Project Experience:

Project: Customer Segmentation and Credit Classification **Client:** Namely Inc.

Role: Machine Learning Engineer

Deliverables: Developed an automated tool for customer segmentation, categorizing Namely customers based on transaction records, credit scores, and other features, while predicting the top 5 insurance schemes with the highest probabilities.

Methodology: Agile

Model Architecture: Semi-Supervised

Responsibilities:

- Collected and preprocessed data from the Namely server, ensuring data quality for analysis and model development.
- Conducted exploratory data analysis to gain insights into data behavior and distribution.
- Applied distance-based and density-based clustering techniques to optimize the number of clusters, using metrics like homogeneity, completeness, and V-score.
- Evaluated and fine-tuned machine learning and deep learning models (XGBoost, Random Forest, SVM, and ANN) to predict the most suitable insurance offers for customer segments.
- Optimized models using Random Search.
- Dockerized and deployed the final model using FastAPI on AWS.

Achievements:

- Received the Employee of the Month award for exceptional development and delivery of the solution.
- Gained recognition from the client for delivering impactful results, which led to further collaboration opportunities.

Project: Image Classification and Tumor Identification **Client:** Oncora Medical

Role: Deep Learning Engineer

Deliverables: Developed an automated tool to identify melanin-forming cells in cell scan images, achieving an accuracy exceeding 97.9%.

Methodology: Agile

Model Architecture: Supervised (Densely Connected Convolutional Networks)

Responsibilities:

- Collected data from the Oncora server and created automated scripts to classify images based on name annotations.
- Developed efficient convolutional neural network models using transfer learning and deep learning techniques (VGG16, VGG19, Inception V3, ResNet-50) to detect anomalies.
- Fine-tuned models to achieve desired accuracy, addressing overfitting with Grid Search optimization.
- Applied regularization techniques such as L1/L2 normalization and dropout to improve model generalization.
- Dockerized and deployed the model.

Skills

Machine Learning, Deep Learning, Data Science, Generative AI, Time Series Forecasting, Statistical Modeling, Python, People M, Image Recognition

Education

Kalyani Government Engineering College | Kalyani, India
B.Tech in Computer Science | 07/2018

Certificates

Certified Data Scientist - Johns Hopkins University, Machine Learning on Google Cloud - Google

Awards

Three-time Deloitte Employee of the Quarter, Innovation Lab Enginex AI IOT Challenge - Finalist 2017

Volunteering

Volunteer: Global Virtual summit on Artificial Intelligence (RAISE2020) by Ministry of Electronics and Information Technology, India

Mentor: Codechef

Links

Website : Portfolio Website

Open Source : Github , Kaggle

Social Profile : LinkedIn