
PRADEEP NATARAJAN

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Data Science Leader

Summary

- Results oriented data science and machine learning consultant with 13+ years of professional experience.
- Expertise in applying data science frameworks in finance and health care domains , development of statistical and machine learning models in Python, Spark ,SAS.
- Collaborating and managing a data science team of 25+ members and working on portfolio of fraud products which has over Billion dollars revenue in fintech.
- Expertise in building recommender engine
- Expertise in text mining, natural language processing and computer vision.
- Developed and production real time recommender engine with feedback loop, which has active 40,000+ doctors using across US and Canada.
- Identify potential gaps ,Prototype progressive and scalable solution from development to deployment.
- Strong communication skills in collaboration with business partners throughout the software development lifecycle in agile workflow.
- Flexible thinker and team player focused on delivering results driven solutions and continuous improvement throughout organization.

Work experience

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|----------------------|--|
| Feb-2022 - Present | Senior Manager , Data Science (IC + Manager Role)
<i>Paypal inc</i> <ul style="list-style-type: none">• Created merchant embeddings by consolidating various merchant features and generated the latent representation using deep learning architecture , for finding similar merchants.• Developed a light weight fraud detection model to handle the timeouts on the transactions• Merchant onboarding and monitoring on FPA and FPS products , finding new fraud patterns and generating rules to handle the fraud patterns• Currently working on finding patterns on bad emails , using char embeddings and other NLP techniques• Hire and mentor junior data scientist , enabling the team to learn , grow and manage the deliverables |
| Sept-2018 - Jan-2022 | Principal Data Scientist
<i>Ilink Systems</i> <ul style="list-style-type: none">• Strategize & Build Recommendation platform for the VCA hospitals using Artificial intelligence.• Design & build Product Recommendation Engine to automatically recommend medication based on patient's concerns using Deeplearning and recommendation algorithms• Build deep neural networks models using NLP to translate the free text language to structured tags• Build deep neural networks NLU models to better represent the context of the natural language to find intends (using Bi-LSTM and attention mechanism)• Analyze Order and Pricing portfolio , create a dashboard to statically understand the fluctuations in order counts over the period of years.• Designed and implemented computer vision models to analyze sewer videos and detect defects. |

- Productioned the models using feedback loop to capture the responses and retrain to improve the accuracy and to provide personalized recommendations
- Create MLOps and DevOps pipeline to production the models in Azure cloud workspace.
- **Helped the organization to setup Data Science COE , was leading the team to strategically handle various data science portfolio projects horizontally**

Dec 2013 - Sept 2018 Senior Associate – Data Scientist

Cognizant Technology Solutions, India & USA

- Work and assist in the contribution and enhancement of projects while implementing credit risk models and real time fraud detection models using advanced machine learning algorithms.
- Create statistical reports post model implementations to business team for deeper insight of the data and performance
- Worked in machine learning algorithms like XGboost and Regression methods using python and spark.
- Collaborate with team to design, develop, implement and execute programs in a view to provide quality assurance of the products.
- Initiate innovate design strategies and plans in an endeavor to develop high quality products in favor of the organization.
- Poc's on Neural networks and compare efficiencies with other models
- Implement the developed models in clouds like AWS

April 2010 - Nov 2013 Programmer Analyst

Aon Hewitt, Chennai, India

- Demonstrated solid experience in the field of application programming, application analysis, design of functions and programming.
- Build statistical and machine learning models to predict the trends of data using Python & R
- Created analytical reports to understand the data better and created various scheduled reports using SAS
- Acquired proficiency with the various data base resources and data base management.
- Created a ETL system using SAS to load the files to data repositories .
- Acquired as well as developed test data, revising program(s) resulting in improved performance.

Skills

Classification And Regression Trees

Random forest , Xgboost implementations

Linear Models

regression and classifications (binary and multiclass)

Deep learning

ANN , LSTM, encoders, StarSpace architecture etc

NLP

Transformers , custom word and context embeddings for free texts

Distributed Systems

Data extraction , manipulations using Hadoop file systems , spark , BigQuery

Statistics

EDA: Data distributions , correlations , hypothesis testing etc

Model Experimentation

Validate Model Quality , data drift analysis , experimentation setup

Cloud

Experience in Azure , AWS and GCP

Education

- 2015 - 2016 Statistics and Machine learning
Indian Statistical Institute
- 2005 - 2009 Bachelor Of Engineering in Computer Science
College of Engineering, Guindy Anna University, Main campus

Certifications

- SAS Certified Base Programmer for SAS 9 from [SAS Institute](#)
- Deep Learning Specialization from [deeplearning.ai](#)
- Natural Language Processing Specialization from [deeplearning.ai](#)