Pradeep Natarajan

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PROFILE SUMMARY

Results oriented data science consultant with 10+ years of professional experience in Data Science, Data Analytics, and Business Intelligence. Expertise in applying data science frameworks in Banking and health care domains and development of statistical and deep learning models in Python, R , SAS , PySpark . Expertise in text mining and natural language processing. Strong communication skills in collaboration with business partners throughout the software development lifecycle in agile and waterfall methodologies. Flexible thinker and team player focused on delivering results driven solutions and continuous improvement throughout organization

❖ Collaborate with business operations and product management to develop business analytics solutions for various business units.
❖ Experience in **natural language processing, natural language understanding, text analytics** and **pattern recognition.**
❖ Experience in **building recommedation engine** plotforms using **deeplearning models**
❖ Experience in building **credit risk and fraud detection** model
❖ Hands-on experience in designing and building **machine learning** models using **Python** ,**Sklearn** , **Keras, TensorFlow, PySpark MLLib**
❖ Experience training supervised and unsupervised machine learning models: Clustering (k-means, c-means), Regression (linear, multivariate, logistical), Classifiers (decision trees, random forests, Naïve Bayes, support vector machines), principal components analysis (PCA).
❖ Experience in creating machine learning solutions in **Cloud platforms** like **Azure and AWS**
❖ Experience in creating **MLOps** and **DevOps pipeline** for machine learning models
❖ Experience in extracting raw data from structured and unstructured data sources, transforming it using **SAS**,**Spark**, **Python**, **SQL**, **regular expressions**, and loading into an enterprise data warehouse (**Extract-Transform-Load**).
❖ Experience in designing stunning visualizations using **Tableau software, SAS** and publishing and presenting dashboards on web and desktop platforms.

CORE COMPETENCIES

❖ Azure Cloud and AWS	❖ Business Intelligence (BI)	❖ Credit risk models
❖ natural language processing	❖ Decision Analytics	❖ Implementation & Documentation.
❖ Predictive Modeling	❖ Neural Networks	❖ MLOps and DevOps
❖ text analytics	❖ Model Testing and Validation	❖ Fraud modeling
❖ Big Data Queries and Interpretation	❖ Architectural Assessment	❖ Software Engineering
	❖ Real time analytics	❖ Troubleshooting

TECHNICAL SKILLS

Operating System: UNIX & Windows
Programming Languages: Python , Base SAS, Advanced SAS, R , Scala ,SQL, UNIX Shell Scripting
Databases: Teradata , Oracle, SQL Server, Hive , Azure Databricks Management systems
Analytical Tools: Azure Auto ML , AWS Sagemaker , SAS EG,SAS Eminer, MS Excel
Big Data: Spark 2.x ,Hadoop,Hive,HDFS
Analytical software: SAS, Python (numpy ,pandas & other packages used for data science) , Spark, Excel
Cloud : Azure ML & AWS

WORK EXPERIENCE

Ilink systems , USA   **Sept 17 2018 Till Date**
Senior Data Scientist

- ❖ 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 transalate 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 Convolution, Bi-LSTM and attension mechanism)
- ❖ Analyse Order and Pricing portfolio , create a dashboard to statiscally understand the fluctuations in order counts over the period of years.
- ❖ Create MLOps and DevOps pipeline to production the models in Azure ML workspace.

CognizantTechnology Solutions , India & USA   **Dec 2nd 2013 Till Sept 14 2018**
Senior Associate – Data Scientist

- ❖ 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

Aon Hewitt ,Chennai, India.   **Apr 8th 2010 till Nov 29th 2013**
Programmer Analyst

- ❖ 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.

PROJECT

Project Title: Product & Appointment Recommendation Engine
Client: VCA hospitals
Duration: sept 2018 – Present

- ❖ Strategize & Build Recommendation platform for the VCA hospitals using Artificial intelligence.
- ❖ Develop Product Recommendation engine to automatically recommend medication based on patient's concerns using Deeplearning and recommendation algorithms
- ❖ Building Appointment Recommendation engine to automatically recommend preferred doctors and preferred day and time of appointment for the patients appointment visit using Deeplearning and recommendation algorithms.

Project Title: RISK RFT MRA – Risk & Fraud model implementations
Client: JP Morgan & Chase
Duration: March 2017 – aug 2018
Project Description: JPMC as part of this project gets credit risk and fraud models from core modeling team and implements them using bigdata technologies like spark and Hadoop.

- ❖ Closely work with clients to gather requirements and build development plan for model implementation
- ❖ Develop real time fraud models using advabced machine learning models
- ❖ Apply advanced techniques to visual data and trends.
- ❖ Convert the SAS codes to python in spark environment, analyse the efficiency
- ❖ Prepare documentation and walkthrough the implementation to model governance team for production approval

Project Title: SAS Upgrade program
Client: CSAA Insurance
Duration: October 2016 – December 2016
Project Description: The project MADW involved in implementing 12 predictive Models by identifying the source of these predictive Models and remap the source variables and tables to the in-house DB.

- ❖ Develop the predictive models using the new in house DB and if necessary tune the models for more precision.
- ❖ Closely work with clients and business partners to gather requirements and build development plan
- ❖ Took the responsibility for the end to end development support.
- ❖ Collaborated with the data engineer and SME to understand the source variables and map those variable to the in-house DB. Developed the SAS codes and unite them

Project Title: V2020 Consumer Business Aetna Renewal Management
Client: Aetna inc
Duration: April 2016 – September 2016
Project Description: Aetna created a new enterprise application for the annual passive renewals, to accommodate this consumer business team have decided to create a repository in SQL DB, that contains the renewals information from where the ON exchange and exchange 834 files can be generated.

- ❖ Transformed business requirements into technical specification document
- ❖ Created technical design document which has the algorithmic approach of the each EBNs.(enterprise business need)
- ❖ Created SAS Scripts, SQL queries and unit test them. Developed UI screens using SAS/Internet for operate team.
- ❖ Worked closely with scrum master to split the requirements into sprints and stories.

Project Title: CAF UDBA Build & Support
Client: JP Morgan & Chase
Duration: December 2013 - march 2016
Project Description: This project tracks & monitors the behavioural aspects of customers across delinquency buckets and reports the details to the business team. Project owns several credit risk related reports that Needs to be delivered to business team on daily, weekly, monthly and quarterly basis

- ❖ Co-developed ideas & strategies with client and develop reports using SAS
- ❖ Remediated the existing SAS scripts for efficiency and precision
- ❖ Evaluated the existing scripts for data anomalies
- ❖ Initiated ad hoc's, which involves combining multiple input files from the data warehouse into a single file for various reporting in a timely manner.

Project Title: Defect Resolutions
Client: PNC Financial
Duration: April 2010 – September 2013
Project Description: This project engagement involved profiling defects resolutions in the SAS scripts. The aim of the project is to reduce defects in the codes and also aimed to reduce the system defects prevailed with PNC financial client.

- ❖ Identified the existing problem inside the scripts. Co-developed business logic to address the problem.
- ❖ Revised the SAS scripts in-line with the business requirement.
- ❖ Optimized the code by doing iterative enhancements.
- ❖ Develop ETL jobs to inject the legacy client data to AON database.
- ❖ Develop reports and dashborads

❖ AWARD

- ❖ Valuable innovator award for 2017 (presented 2 automations tools to innovation governance team and successfully implemented in client ecosystem)
- ❖ Prestigious awards in Aon Hewitt, premium member of the team award for my excellent workmanship in the organization.
- ❖ Xtra Miler award by Aon Hewitt in Feb 2012 towards my hard work during Annual Enrollment 2011.
- ❖ Received appreciation from Business team of JPMC for my excellent display in securitization process remediation.

EDUCATION

Indian Statistical Institute	**2016**
Statistics and Business Analytics	
College of Engineering, Guindy Anna University Main campus	**2009**
Bachelor Of Engineering in Computer Science	
Anita Matriculation Higher Secondary School	**2005**
Higher Secondary (XII)	
Anita Matriculation Higher Secondary School	**2003**
SSLC (X)	

CERTIFICATION AND TRAINING

SAS Certified Base Programmer for SAS 9 from **SAS Institute**	2015
Python and Machine Learning Bootcamp Training – **Udemy**	2017

REFERENCE AVAILABLE UPON REQUEST