NIKHIL KUMAR SHARMA

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PROFESSIONAL SUMMARY

TOTAL EXPERIENCE: 6 years

Experienced Data Scientist specialized in Machine Learning, NLP and Deep Learning. Proven expertise in <u>Telecom</u>, <u>Banking</u>, <u>Automobile and Information Security domains</u>. Strong in end-to-end project handling, from requirement/data gathering to development to deployment. Continuously learning new technologies to efficiently complete projects and drive business to success.

SKILLS AND TOOL SETS

| Languages & Framework | Python, Pyspark, Keras, HTML, CSS, Flask, FastAPI, Streamlit, etc. | | |
|-----------------------------------|--|--|--|
| Machine Learning | Clustering, DNN, CNN and RNN, LSTM, Linear, Polynomial, Logistic, Ridge and Lasso | | |
| Algorithms | Regression, Decision Tree, Random Forest, k-NN, SVM, K-means | | |
| Core Competencies | Supervised, Un-supervised, Classification, NLP, Deep Learning, Statistical Model, Data | | |
| Science, Scripting and Automation | | | |
| Data Visualisation | Matplotlib, Seaborn, Plotly, Power BI, Storytelling. | | |
| Databases | SQL Server, MySQL, PostgreSQL, MongoDB, Oracle, SQLite | | |
| Tools & Software | Azure, Jupyter Notebooks & Lab, Anaconda, Spyder, Git, Docker, Jenkins, VS Code | | |
| Big Data | Pyspark, Hadoop, Spark, HDFS, S3 bucket, Blob storage | | |
| Libraries | Numpy, Pandas, Scipy, Scikit-Learn, Requests, DASH, BeautifulSoup, TensorFlow, | | |
| | TextBlob, re, Pytorch, NLTK, SpaCy, Gensim, OpenCV | | |
| Domain | Telecom, Banking and Finance, Internet Security, Automobile | | |

EXPERIENCE

■ RELIANCE JIO DATA SCIENTIST | ML & BIG DATA ENGINEER

Oct 2021 - Till Date

Connected Components

Clustering of telecom affinity data on the geospatial region to get the data segregated cluster to work on eTilt-optimisation.

Network Monitoring

Implemented monitoring of key user cellular metrics (RSRP, CQI, TA) at city level, identifying anomaly clusters and optimizing eTilt; created a dashboard for data visualization, enabling strategic decision-making in network optimization.

- eTilt Optimisation

Implementated a custom in-house developed optimization algorithm to optimize the e-tilts of the cells on the network tower with the sole aim to improve the user's network experience.

- Anomaly Detection (Network Security)

Build an anomaly detection end-to-end pipeline to detect port scans with a negative intent, which can come from within or outside of the network.

- Credit Risk Modeling

Engineered a proprietary credit score model using Telecom data, creating customized scorecards for all partners; developed an advanced data workflow for EDA, feature generation, and scorecard formulation, leveraging WoE and IV techniques.

- **Tech Stack Used:** Pyspark, spectral clustering, Jupyter-lab, data transformation, HDFS, Git, Kepler-maps, etc.

COGNIZANT

DATA SCIENTIST - CONSULTANT

Sep 2020 - Sep 2021

Mercedes-Benz Research & Development India (MBRDI) - Global Software Engineering Platform (GSEP)

Spelling Correction Model [NLP]

Developed and deployed a spelling correction module for the chatbot (RASA).

Challenge: Domain Specific words, shorthand, URLs and email IDs.

Process Flow: Data collection, transformation, model training, serialization & other supporting scripts.

- Dashboard - Price Parts Simulation Dashboard - Price Demand Elasticity - [Trucks]

Show KPIs and Price Simulations based on various selections like price change, volume change, and discount group for a selected market and part type. Also displaying the break-even data in a tabular format based on the user's selection.

- Chatbot Dashboard

Development and deployment of a comprehensive Admin dashboard showcasing KPIs essential for chatbot performance evaluation. These KPIs will encompass metrics such as chatbot usage, session time, response ratings, top-performing intents, CISM ticket volume and departmental penetration by the chatbot.

- Data Extraction Pipeline with Jenkins | Cron Job triggered daily at 00:00

Data extraction from Postgres, sourced from RASA's 'events' table, is followed by transformation into structured data and storage in a different table.

- **Tech Stack Used:** Python, NLP, Plotly, Dash, SQL on Azure, Azure Services, Azure Devops, Spello Language Model (based on Symspell-Fuzzy Search), Postgres dB, Docker, Network error handling.

CAPGEMINI

DATA SCIENTIST - CONSULTANT

Nov 2018 – June 2020

ANZ - Bank Guarantee for Trade & Finance - Digital Transformation

Multi-Class Document Classification | Text Classification

Classification of Bank Documents (ex. BG, Request Forms, ASIC, CLAA, Email, Others)

Process Flow: Data Mining, Abby + Data Cap OCR, XML Parsing, Text Cleaning, Text Analytics, Feature Engineering, Algorithm Selection, Model Validation and Optimization.

Named Entity Extraction using LSTM

Extraction of multiple entities like Applicant Name, Beneficiary Name, ABN/ACN Numbers, Issue Date, Expiry Date, Purpose etc. from Request forms, Bank Guarantees and Emails.

Process Flow: Abby + Data Cap OCR, XML Parsing, Text Cleaning, data preparation, data tagging, model building, model training, and model validation.

Automated Form Processing with AI

Insertion of specific entities if they are present and their location when those entities are not present in the Bank Guarantee Document Template of ANZ or of its clients.

Tech Stack: LSTM + Rule Engine + Regex + Logic-based solution to automate the form-filling process by the Maker and Checker that reduced the time required by 80% on an average.

Capgemini Centre of Excellence (COE)

- Cognitive Document Processing (CDP) Platform

Capabilities: OCR, Text Extraction, Text Classification, Language Detection, Natural Language Generation. Document Types: Driving License, W9 Form, Balance Sheet, Contractual Form, Aadhar Card, Pan Card etc.

- **PII-Redaction** (Personal Identifiable Information censoring)

A solution is used to censor the PII present in any document, either in the image or pdf format and then generate the same document in the same format with all the PII redacted.

■ CONFIDENTIAL PYTHON DEVELOPER April 2018 – Nov 2018

- Automation of Domain Fingerprinting
- DDoS Attack Module & Prevention Module
- Application Testing
- Server Audit Automation for Auditing (LAMP Stack)
- Web Scrapping and Data Wrangling

| EDUCATION | | | | | | |
|-----------|------------------|--------------|----------------------------------|--------|-------------|--|
| - | Graduation | MAE | HMRITM, Delhi | 72 % | 2012 – 2016 | |
| - | 12 TH | Science + CS | Kendriya Vidyalaya, Delhi (CBSE) | 75 % | 2011 – 2012 | |
| - | 10 TH | Regular | Kendriya Vidyalaya, Delhi (CBSE) | 81.7 % | 2009 – 2010 | |