

## EDUCATION

Indian Institute of Technology, Kharagpur

July 2012- Jun 2017

Dual Degree (B.Tech+M.Tech) Mining Engineering – CGPA:7.77

## EMPLOYMENT

UnitedHealth Group - Gurugram, India

March 2023-Present

Senior Data Scientist (March 2023-Present)

As a Senior Data Scientist spearheading the Provider Directory Modernization initiative, I hold a pivotal role in shaping our strategy to optimize healthcare services in the USA through the refinement of Provider Entity Management

- Orchestrated and led a globally dispersed cross-functional team to deploy and deploy data ingestion pipelines and AI models
- Achieved **92% accuracy** in identifying erroneous provider information such as contact and insurance details by developing data science model integrating data from multiple sources
- Led the deployment, while following responsible AI principles and scaled the solution for 22M providers leading to saving potential **\$30M cost saving** in operations annually

Accenture Applied Intelligence – Bangalore, India

July 2019 - Feb 2023

Data Science Consultant (June 2021-Feb'2023)

Leading a cross-functional team to design, develop, implement, and iterate ML based solutions. Responsible for driving communication with client and senior leadership aimed at expanding product offerings to different fields and use cases.

**AI for PII/PHI Redaction:** Developed and deployed cloud based AI solution to assist PII redaction for Legal Documents using ML and NER

**HEDIS AI Abstractor:** Develop AI based tool for HEDIS data extraction for Star Ratings to Health Plans

- **Designed** and implemented **solution architecture** to link clinical evidence to HEDIS measures using Knowledge Graph
- Improved clinical evidence detection precision by **25+%** through analyzing human feedback and building/retraining ML models

Data Science Analyst (July 2019-May 2021)

**AI for Medical Document Processing:** Identify valid clinical information on medical documents by designing custom workflows utilizing NLP, ML techniques. The deployed solution makes the medical chart review process **10 times faster** and reduces the **cost by 25%**.

Improved **precision by 12%** points by developing a text classification model using Bio-Bert Embeddings to reduce false positives

Developed a custom NER model using Spacy and LSTM (Keras and tensorflow) to identify patient and provider names of encounters on a medical chart achieving **90%+ precision/recall**. Deployed the model using Flask, Docker, Kubernetes, and AWS ECR

- Received **Star and Spot awards** for multiple quarters for significant contribution to project's assets

**Skills** – Solution Design, Python, Machine Learning, Deep Learning, SQL, Arango, Docker, Kubernetes, AWS, Keras, Databricks

Technosoft Corporation – Bangalore, India

Jan 2018 – June 2019

Data Scientist (Jan 2018 – June 2019)

**ICD-10 CM Code Prediction:** Develop a solution using Machine Learning and NLP techniques to predict ICD-10 CM code for ambulance trips to be used for billing. The solution reduced manual effort by **70+%** and processes **10k+** ambulance trips daily.

- Achieved **88% accuracy** by implementing Randomforest algorithm for text classification to predict ICD-10 CM codes

**Quality Audit Tool:** Develop a focused sampling plan using Machine Learning to decrease manual effort and hence increase efficiency of Provider Data Management. Successfully deployed for QA (Quality Assurance) Team to be used for 2 Healthcare providers in the USA.

- Reduced manual effort by **50+%** and enhanced error detection rate by **20%** through ensemble model of Randomforest and NN

**Skills** - Python, Machine Learning, Deep Learning, SQL

Meru Cabs Company Pvt.Ltd. - Mumbai, India

July 2017 - Dec 2017

- Analyzed data from customer complaints and gathered insights focused on automating complaint handling process

• Designed a process flow to automatically manage 40% complaints and reduce manual effort by 20% utilizing ML algorithms

- Coordinated the project of live tracking using driver's GPS for improved monitoring of driver's activity, enhancing user experience

## CERTIFICATIONS

- AWS Certified Solution Architect – Associate
- AWS Certified Machine Learning - Specialty

## SKILLS:

- **DATA SCIENCE:** Natural Language Processing, Machine Learning, Deep Learning, Statistical Inference, Regression Analysis
- **PROGRAMMING AND DATABASE MANAGEMENT:** SQL, Arango, Python, R, neo4j, Pyspark
- **TOOLS & TECHNOLOGIES:** Docker, Kubernetes, Spark, GoogleVision, Hadoop, Hive, Flask, Keras, Tensorflow, Excel, Powerpoint