

EXPERIENCE

• Gigaforce Private Limited

Senior Software Engineer - AI/ML

Noida, India

October 2022 - Present

- Utilized expertise in US insurance claims data to **identify and maximize subrogation potential, resulting in a 30 percent increase in revenue** for clients
- Collaborated with subject matter experts to incorporate domain knowledge and tailor subrogation process** to meet specific client needs
- Applied natural language processing techniques to understand context** and accurately determine parties at fault in loss descriptions
- Implemented **digitization of insurance claims documents** to streamline information extraction and improve overall claim process
- Designed and **developed scalable, efficient ingestion pipelines** to integrate predictive model output into databases
- Created and **implemented architecture for various products** to ensure proper monitoring and scalability
- Developed and **applied advanced algorithms for subrogation opportunity identification**, leading to increased efficiency and revenue for clients
- Built and maintained strong relationships with clients and subject matter experts** to understand and meet their unique business needs
- Conducted **extensive data analysis and visualization to identify patterns and trends in claims data**, informing the development of improved subrogation models
- Led the development of software solutions** that automates the subrogation process, resulting in increased speed and accuracy
- Worked with cross-functional teams** to develop and implement best practices for data management and quality control
- Utilized Machine Learning techniques to improve the accuracy** of subrogation identification and increase the revenue

Technologies: Python, SQL, Tensorflow, Scikit-Learn, Pytorch, Docker, GCP, Spacy, Word2Vec, Large language models.

Theory: Data Preprocessing, Statistical Modeling, Deep Learning, Linear Algebra, NLP.

• Navia Life Care

Machine Learning Engineer

Gurgaon, India

August 2019 - September 2022

- Led the development and **implementation of an ETL pipeline using PostgreSQL and Django**, including a reporting system and data visualizations using HTML, CSS, and JavaScript
- Built an **end-to-end system for collecting and labeling doctor's handwritten prescriptions**, achieving a **90 percent accuracy rate in offline recognition**
- Leveraged collected data to enhance **handwriting and character recognition on doctor's prescriptions** through the utilization of CNN, RNN, and CTC techniques
- Implemented personalized recommendation models for doctors** based on usage data
- Contributed to the **development of a Clinical Decision Support System** for the EHR system using SNOMED CT Database and healthcare data
- Created data pipelines and automated the reporting process** and data management for thousands of doctors and millions of patients
- Developed APIs** for insights and analytics dashboards for doctors
- Led the design and implementation of architecture for various products to ensure scalability and proper data reconciliation

Technologies: Python, SQL, Django, Tensorflow, Docker, GCP, AWS, Javascript, MongoDB.

Theory: Data Preprocessing, Statistical Modeling, Deep Learning, Linear Algebra, NLP, Recommendation systems.

EDUCATION

- **Guru Gobind Singh Indraprastha University**
B.Tech. Computer Science and Engineering (7.37 CGPA)

New Delhi, India
July. 2015 – June. 2019

CERTIFICATIONS

- **Applied AI Course**

Fundamentals of Programming
Data Science: Exploratory Data Analysis and Data Visualization
Foundations of Natural Language Processing and Machine Learning
Machine Learning - II (Supervised Learning Models)
Feature Engineering, Productionization and deployment of ML Models
Machine Learning Real-World Case Studies
Data Mining(Unsupervised Learning) and Recommender Systems + Real-World Case
Neural Networks, Computer Vision and Deep
Deep Learning Real-World Case Studies

Issued August 2021
Issued October 2021
Issued January 2022
Issued February 2022
Issued March 2022
Issued April 2022
Issued May 2022
Issued June 2022
Issued July 2022

PROJECTS

- **Building a Machine Learning Pipeline for Image Classification using Apache Kafka and Neural Networks**

- Developed a machine pipeline using Apache Kafka for classifying fashion clothing images using deep neural networks
- Utilized the MNIST Fashion dataset for training a convolutional neural network
- Built a complete pipeline for the application using Kafka, including a producer to generate predictions and a consumer to consume the outputs
- Created a retraining pipeline by setting a threshold for predictions and retraining the model
- Utilized Hyperopt for hyperparameter tuning of the models

- **Development of a Captcha Solver using Computer Vision Techniques**

- Developed a captcha solver using computer vision techniques, including image preprocessing, thresholding, and contour detection
- Implemented a convolutional neural network to recognize individual characters within the captcha
- Utilized the OpenCV library for image processing and contour detection
- Improved captcha solving accuracy through the use of image preprocessing techniques and neural network training
- Created a end-to-end pipeline for solving captchas using the developed model

- **Development of a Facial Detection and Recognition System using OpenCV and Machine Learning Algorithms**

- Designed and implemented a facial detection and recognition system using Python and the OpenCV library
- Utilized Haar cascade classifier for facial detection in images
- Constructed a dataset of facial images by capturing them through a laptop webcam
- Implemented multiple classification algorithms like EigenFaces, FisherFaces, and LBPHFaces for recognizing faces in the dataset
- Developed a script to perform live facial detection and recognition through a laptop webcam

ACHIEVEMENTS

- Kaggle Expert
- Achieved top 40 ranking out of 6000 students in the ZS Data Science Challenge 2018.

OTHER PROGRAMMING TOOLS

- **Cloud services:** AWS(EC2, S3), GCP.
- **Deep learning frameworks:** Keras, Tensorflow, Pytorch.
- **Database:** PostgreSQL, MongoDB, ElasticSearch.
- **Python:** numpy, pandas, sci-kit, django.
- **Webserver:** Gunicorn, Apache, Docker, Kafka.