JEEL PATEL

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EDUCATION

NEW YORK UNIVERSITY 09/2024 – 05/2026
MASTER'S IN COMPUTER ENGINEERING
Cumulative CGPA: 3.667/4
Relevant Coursework: Machine Learning, Computer System Architecture, Big Data, Deep Learning, MLOps, Real-time Embedded Systems

SYMBIOSIS INTERNATIONAL UNIVERSITY 08/2020 – 06/2024
BACHELOR'S IN INFORMATION TECHNOLOGY
Relevant Coursework: Distributed Systems, Data Science, Data Mining, Data Structures, Operating Systems, Computer Networks

SKILLS

PROGRAMMING LANGUAGES: Python, JavaScript, C++, PHP, R
DATABASE TOOLS: SQL, MongoDB, PostgreSQL, SQLite, Cassandra, CouchDB
TECHNOLOGY/CLOUD: Tableau, Excel, Node.js, Machine Learning, jQuery, Bootstrap, Apache Spark, Azure, AWS, TensorFlow
DATA ANALYTICS TOOLS: Pandas, NumPy, Matplotlib, Seaborn, Power BI, Scikit-learn, Plotly, Knime, Pyplot

WORK EXPERIENCE

5POINT SOLUTIONS PVT. LTD. | Vadodara, GJ | (INTERNSHIP) 01/2024 – 05/2024
- Architected predictive models using Python, Scikit-learn, and XGBoost to analyze customer churn patterns, reducing churn rate by 18% through targeted interventions.
- Spearheaded ETL pipelines to process and analyze 10M+ data points from multiple sources, reducing data retrieval time by 40%. Refined SQL queries for data extraction and transformation, cutting query execution time by 60%, improving dashboard responsiveness.
- Performed A/B testing on marketing strategies, leading to a 12% increase in conversion rates by identifying high-impact engagement tactics.

WORKNEX PVT. LTD. | Pune, MH | (INTERNSHIP) 05/2023 – 07/2023
- Analyzed customer data from 15,000+ records using Pandas, NumPy, and SQL, generating 15+ automated reports in Tableau to improve trend identification and enhance decision-making efficiency by 25%.
- Leveraged ETL pipelines using Apache Spark and Airflow to clean, transform, and visualize key customer insights, reducing data processing time by 35%.
- Implemented machine learning models using Scikit-learn and TensorFlow, including Random Forest, to predict user engagement trends, increasing targeted marketing effectiveness by 22%.

PERSONAL PROJECTS

NYC CRIME RISK AND ROUTE PREDICTION (Streamlit, Scikit-Learn, Random Forest) 09/2024 – 12/2024
- Developed a machine learning model using Random Forest and Decision Tree to predict crime risk across 300+ NYC neighborhoods, achieving 95% accuracy by analyzing 500,000+ historical crime records.
- Engineered a route optimization algorithm that dynamically adjusts paths based on real-time crime risk, reducing exposure to high-risk areas by 25% and improving travel safety. Built an interactive Streamlit dashboard integrating geospatial crime heatmaps and risk-weighted pathfinding, enabling users to make data-driven routing decisions.

OPTICAL CHARACTER RECOGNITION APPLICATION (Python, OpenCV, Tesseract) 06/2024 – 05/2024
- Leveraged OpenCV and Tesseract to create an OCR system, achieving high-accuracy text recognition across a dataset of 10,000+ images by optimizing image preprocessing techniques.
- Deployed pre-processing algorithms such as noise reduction, thresholding, and edge detection, improving OCR accuracy by 30% and reducing processing errors by 25%.
- Optimized workflow efficiency by reducing manual data entry time by 80%, enhancing user productivity by 40% through automated text extraction and structured output generation.

FACULTY FEEDBACK SYSTEM (Python, SQL, Power BI). 07/2023-11/2023
- Engineered a data-driven faculty feedback system using Python, SQL, and Flask, automating the collection and analysis of 500+ student evaluations per semester, improving decision-making efficiency through sentiment analysis and statistical insights.
- Created interactive Power BI visualizations, reducing faculty performance review time by 50%, while enhancing user experience by 30% through an intuitive and efficient interface.

PUBLICATIONS

QUANTITATIVE ANALYSIS OF MACHINE LEARNING AND DEEP LEARNING MODELS IN DYSRHYTHMIA CLASSIFICATION 07/2023-05/2024
- Devised a customized version of Convolutional Neural Networks (CNN) with leaky ReLU activation and conducted comparative analysis of max pooling and min pooling techniques and evaluated 4 different models. Exhibited significant advancements in the accuracy of 97% with a recall of 97.2%, precision of 90.8%, F1-score of 90.4%.

LEADERSHIP ACTIVITIES

NGO SARVAHITEY (Social Work) 08/2022 – 11/2022
- Volunteered with an NGO for 3 months, empowering underprivileged children to embrace technology through hands-on learning sessions. Led over 15 engaging meetings with student. Managed social media platforms to effectively disseminate, critical information about Covid-19.

TECH-FEST VOLUNTEER (University-Fest) 10/2022 – 11/2022
- Facilitated the event during the college fest, where students showcased their creativity and technical skills in a website-building challenge.

PYTHON BUDDY SESSION (Workshop Leader) 6/2021 – 7/2021
- Organized and conducted a 2-hour interactive session to teach the basics of Python programming to a class of 30+ students.