CHIRAYU PATEL

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Education

Doctorate in Electrical Engineering: (Machine Learning) Drexel University, Philadelphia, PA, *September 2023 – June 2027*

Bachelor of Technology in Computer Science: Birla Vishwakarma Mahavidyalaya, Anand, India, *August 2017 - July 2021*

Technical Skills

Tools: SQL / NoSQL - MongoDB, Bitbucket, Git, Docker, Kubernetes, Azure, AWS, GCP

Programming Concepts: AMD AI Engine, Python, React, Angular, Node.js, R, Java, C#, Spark, Hadoop, Natural Language Processing (NLP), Recommendation Algorithms, Data Analysis, Model Development and Optimization, Statistical Analysis.

Experience

Research Assistant: College of Computing and Informatics, Drexel University, Philadelphia, PA, *June 2024 – Present*
- Worked with Docker containers and managed a Docker Data Fed and Globus instance.
- Assisted with research for designing, implementing, and testing the storage adapter from Globus to DCS Store.
- Built a drag-and-drop UI for automating the uploading of instrument data to a Data Fed instance.

Senior Software Developer: It Idol Technologies, Valsad, Gujarat, India, *December 2022 – August 2023*
- Oversaw Agile teams and applied Agile techniques to accelerate development cycles and beat project deadlines.
- Team members were encouraged to reach objectives, standards, and creative solutions.
- By leading cross-functional initiatives to find and incorporate cutting-edge solutions.

Software Developer: Grace and Faith Ministries, Surat, India, *June 2021 - December 2022*
- Developed and implemented novel software solutions for clients, which resulted in an increase in customer satisfaction ratings.
- Machine learning algorithms were used to create predictive models that increased the accuracy of sales forecasts resulting in more efficient resource allocation.

Projects

Book Data Analysis. Drexel University *(September 2023 – January 2024)*
- Spearheaded a comprehensive Python project for book data analysis utilizing Open Library and Google Books APIs, resulting in a robust dataset for further exploration.
- Executed extensive data cleaning, preprocessing, and analytical techniques to extract meaningful insights, significantly enhancing the accuracy and relevance of recommendation systems.
- Developed impactful visualizations and detailed summaries, uncovering critical industry trends and identifying top publishers, which provided strategic advantages for stakeholders in the book industry.

E-Commerce Customer Behavior Analysis. IT Idol Technologies - Valsad, India *(January 2023 - August 2023)*
- Collected and cleaned customer data applied K-means clustering to segment customers and analyzed segments to tailor marketing strategies.
- Developed a logistic regression model to predict customer churn, performed feature engineering, and evaluated the model using accuracy and F1-score.
- Created interactive dashboards in Tableau to visualize customer segments and churn predictions, enabling data-driven decision-making.

Health Care Data Analysis. Grace and Faith Ministries - Surat, India *(June 2021 - December 2022)*
- Built random forest models to predict patient risks for conditions like diabetes and heart disease, using preprocessed patient records.
- Analyzed the effectiveness of treatments using statistical methods and compared patient outcomes to identify the best protocols.
- Created visualizations with Matplotlib and Seaborn to present risk factors and treatment effectiveness, facilitating communication with healthcare professionals

Financial Fraud Detection. Grace and Faith Ministries - Surat, India *(June 2021 - August 2022)*
- Analyzed transaction data to identify anomalies and potential fraud indicators, using statistical techniques such regression, correlation, time series and visualization using tableau and python graphs.
- Created features like transaction frequency and amount deviations to enhance model performance, improving fraud detection accuracy.
- Developed logistic regression and decision tree models, evaluated them with precision and recall metrics, and iterated on improvements.

Certifications

- Microsoft Azure Fundamentals - Microsoft - *Sept 2022*
- End-to-End Machine Learning with TensorFlow on GCP – Coursera – *Oct 2021*