

# Tirth Shah

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## EDUCATION

University of Maryland, Robert H. Smith School of Business  
Master of Science in Information Systems, 3.7

College Park, MD, USA  
December 2024

Vishwakarma Government Engineering College  
Bachelor's Degree, Electronics and Communication, 3.5

Ahmedabad, Gujarat, India  
June 2022

## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, R, PHP, HTML, CSS

**Machine Learning:** Scikit-learn, TensorFlow, Regression (Linear, Logistic), Classification, Clustering, Decision Trees, Random Forest

**Database Technologies:** MySQL, PostgreSQL, Microsoft SQL Server, MongoDB, Neo4j

**Data Analysis & Visualization Tools:** Power BI, Excel (Advanced), Tableau, Jupyter Notebook, R Studio, Pandas, NumPy, Matplotlib

**Big Data Technologies:** Hadoop, Spark, Hive, HDFS, MapReduce

**Cloud Services:** Google Cloud Platform (BigQuery, Dataflow, AI Platform), Oracle Cloud (OCI, Oracle Big Data Service)

## CERTIFICATIONS

- Microsoft Certified: **Power BI Data Analyst Associate** (PL-300), Coursera Certified: Google Data Analytics Professional Certificate

## WORK EXPERIENCE

MSquare Technologies

Surat, Gujarat, India

Data Analyst

May 2022 – July 2023

- Designed **interactive dashboards and insightful reports** to replace inefficient, outdated paper-based processes into fully electronic solution, improving stakeholder understanding by 15% through data-driven analyses of the entire digitization process.
- Collaborated with cross-functional teams to address complex business challenges using Power BI, SQL, and advanced analytics, resulting in a 20% improvement in issue resolution through actionable insights and automated reporting.

MSquare Technologies

Surat, Gujarat, India

PHP Developer Intern

February 2022 – May 2022

- Engineered and deployed a robust **Driver Management System** using PHP and MySQL, optimizing driver and bus schedule coordination, which reduced administrative errors by 20% through automation and enhanced workflow integration.
- Enhanced system scalability and user interface by integrating automated reporting tools, which improved operational efficiency and streamlined relationship management with real-time **performance tracking**.

## PROJECT EXPERIENCE

**Company Bankruptcy Predictions**

- Developed and deployed a predictive model using **logistic regression** and **PySpark** to forecast company bankruptcy with 89.15% accuracy, analyzing key **financial ratios** such as current ratio, quick ratio, gross margins, net income, and leverage ratio.
- Improved model **accuracy by 15%** through comprehensive data processing, feature engineering, and risk stratification; integrated real-time financial data from Yahoo Finance to boost predictive capabilities and assess bankruptcy risk in real-time.

**Consumer Goods Recommendation Analysis**

- Developed a tailored predictive model using **machine learning** to refine product recommendations, facilitating an increase in conversion rates by 20% and enhancing overall customer experience in the purchasing journey.
- Cleaned a highly unstructured dataset of over 1M+ customer reviews, employing advanced **data cleaning techniques** to handle missing values, inconsistencies, and irrelevant data, ensuring a robust foundation for accurate predictive modeling.

**InsuraBot – Intelligent Home Insurance Assistant**

- Launched an intelligent chatbot utilizing **NLP**, machine learning techniques, and **Retrieval-Augmented Generation (RAG)** to assist users with home insurance inquiries, improving administrative efficiency and enhancing customer service interactions by 45%.
- Utilized **AI-powered GPT** models for advanced language understanding and response generation, achieving 92% accuracy in delivering policy-related information, leading to more accurate and timely responses to user queries.

## EXTRA-CURRICULAR ACTIVITIES

- Actively participated in tree plantation drives and marathons, promoting environmental awareness and community health.