

SANJITH KRISHNA VENKATESH KUMAR

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EDUCATION

PURDUE UNIVERSITY

Master of Science in Business Analytics and Information Management

Teaching Assistant for MGMT 58600 Python Programming, Merit Scholarship Recipient

West Lafayette, IN

Aug 2025

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE (BITS), PILANI

Bachelor of Engineering in Chemical Engineering

Coursework: Probability and Statistics, Advanced Statistical Methods, Numerical Methods in Chemical Engineering

Hyderabad, India

May 2024

EXPERIENCE

HIPPOCRATIC AI

AI Agent Deployment Engineer

Palo Alto, USA

Sep 2025 – Present

- Deployed 15 use cases across 10 healthcare partners in 3 months, processing over 100,000 calls for payor surveys, pre-assessments, intake evaluations, and post-surgery follow-ups.
- Improved response capture rate by 30% on complex calls with 100+ questions through optimization of voice agent form completion workflows.

THE RECORDXCHANGE

AI Engineering Intern

Indianapolis, USA

Jun 2025 – Aug 2025

- Built an AI-powered transcript reviewer using RAG architecture with AWS Bedrock, Claude, and FAISS, reducing judicial hearing compliance review time from 2 hours to under 5 seconds through automated comparison against legal benchmarks.

KEARNEY STUDENT LAB (CAPSTONE PROJECT)

Data Science Consultant

West Lafayette, IN

Jan 2025 – May 2025

- Developed a predictive ensemble model (XGBoost + Random Forest) achieving 97.3% precision in identifying procurement transactions worth negotiating, enabling strategic vendor prioritization.
- Forecasted monthly procurement spend using Holt-Winters smoothing with a low Mean Absolute Percentage Error (MAPE) of just 8.46%, facilitating proactive financial planning for a global insurance client.
- Designed interactive dashboards and governance frameworks to centralize procurement analytics, driving actionable insights and enhancing decision-making transparency for the global insurance client.

FINSIRE

Data Scientist

Chennai, India

Sep 2023 - Aug 2024

- Developed and deployed a valuation model and an extensive database covering all vehicles sold in India (2013-2023), automating collateral value assessment processes and enabled instant collateral-based lending for a fintech platform.
- Built and optimized RestAPI + Flask endpoints to automate price updates for stocks and mutual funds, cutting data refresh time from 2 minutes to 2 seconds per call.
- Developed an NLP-driven bank statement analyzer using Word2Vec and BERT, reaching 65% transaction classification accuracy, approaching the 72% industry benchmark.

PROJECTS

Spotify song recommender

Mar 2025 - Jun 2025

- Clustered 1.2M Spotify tracks into listener-driven archetypes, revealing key shifts in music trends and guiding playlist curation.
- Built an XGBoost-based hit predictor (AUC=0.93), optimizing music marketing and discovery processes.
- Deployed a real-time Annoy + FastAPI recommender on Heroku, delivering scalable, instant song recommendations.

GenAI Instagram Caption Generator

Feb 2025 - Apr 2025

- Built a caption generator using Hugging Face (BLIP) and OpenAI GPT-4 Vision, achieving low-latency responses.
- Deployed scalable FastAPI backend with Docker and Render/Heroku autoscaling, efficiently handling traffic surges.
- Optimized prompt engineering to improve caption relevance and quality, iteratively tuning model inputs based on user feedback.

Instacart Market Basket Analysis (SQL)

Jan 2025 - Feb 2025

- Engineered analytical SQL queries using advanced techniques (CTEs, window functions, aggregations) on 32M+ transaction records to quantify customer loyalty, churn risk, basket composition, and purchasing behaviors.
- Identified high-loyalty and churn-risk products, segmented customers by reorder habits, and derived actionable insights to inform targeted marketing strategies.

Data-Driven Capacitance Prediction Study ([Link to Paper](#)), BITS Pilani

Sep 2022 - Dec 2023

- Developed and fine-tuned machine learning models, including Bayesian Ridge Regression, K-Nearest Neighbors (R^2 : 0.928, RMSE: 0.040), and Artificial Neural Networks (R^2 : 0.893, RMSE: 0.049), to accurately predict specific capacitance in Ti3C2-based supercapacitors.

Optimal Scheduling and Model-Based Control of Chemical Processes, National University of Singapore

Jun 2023 - Dec 2023

- Designed a DLTI-based optimization model using Python and MATLAB, employing SLSQP algorithms to improve pulp plant operational efficiency during critical processes such as shutdowns and startups.

SKILLS

Programming & Databases: Python, SQL (MySQL, PostgreSQL), NOSQL (Firebase)

Python Libraries: Numpy, Pandas, scikit-learn, XGBoost, PyTorch, TensorFlow/Keras, BERT, Word2Vec, DistilBERT, Annoy, Pyomo, Hugging Face Transformers, OpenAI, Joblib, Selenium, Matplotlib, Seaborn.

AI/ML & LLM Technologies: Prompt Engineering, RAG (Retrieval-Augmented Generation), LLM Agents, Model Evaluation & Testing

Cloud & Deployment: AWS (S3, EC2), GCP, Docker, Render, Heroku, Git

Voice & Real-Time AI: Speech-to-Text, Text-to-Speech, Low-Latency Systems, Voice Agent Orchestration

Web & APIs: FastAPI, Flask, REST APIs, HTML/CSS/JS

LEADERSHIP AND ACHIEVEMENTS

Volunteered with the Digital Equity Foundation to bridge the digital divide, designing and delivering a tech curriculum to 1,500+ low-income students over 10 months; led a team of student volunteers at a partner school, ensuring all 98 students gained hands-on experience with G-suite tools.