Nandan Keshav Hegde

hegdenan@msu.edu | GitHub | Portfolio | Rarepeti | Academic and Professional references | Experience certificates

Mobile: 517.528.5277 | Location: East Lansing, MI

Education

MICHIGAN STATE UNIVERSITY

Sep 2024 - Present | East Lansing, MI

Master of Science in Computational Data Science - MSDS (STEM Designated) | GPA: 4.0/4.0 (Top 1% of Class) | GRE 321/340

- Co-founded Rarepeti, an e-commerce initiative aimed at connecting regional vendors and empowering local communities back in India
- Built an end-to-end Natural Language Processing and Generation small-scale cuisine generation and predictive analytics and a Statistical approach to Recommendation System showcasing hands-on implementation of full-stack data applications

MANIPAL UNIVERSITY, MANIPAL INSTITUTE OF TECHNOLOGY

Jun 2015 - Nov 2019 | Manipal, India

Bachelor of Technology in Electrical and Electronics Engineering | GPA: 8.1/10.0 (Top 10% of Class)

- Awarded the prestigious AICTE Scholarship for academic performance and merit throughout the undergraduate program
- Served as Treasurer and President of the MIT Chess Club, Manipal

Internship Experience

EMERGENCE AI

Al research intern | May 2025 - Present | Remote

• ACA Development and Benchmarking: Designed the Agent Creating Agent (ACA) framework for autonomous tool generation and orchestration, achieving 85% task success across domains.

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- **CRAFT Development:** Part of the development efforts for the Gen Agent for CRAFT Emergence Al's flagship platform that enables machine-scale automation of complex enterprise data workflows through natural language commands, boosting Al output quality by ~2x via LLM-as-judge benchmarking and automated prompt pipelines.
- **CRAFT Evaluation:** Streamlined agent assessment by integrating Google Big Query analytics, automating workflows, and configuring domain-specific APIs for CRAFT's private preview.

Work Experience

TREDENCE ANALYTICS SOLUTIONS PRIVATE LIMITED

Data Science Consultant | Jun 2023 – Jul 2024 | Bengaluru, India

- **Promo Optimization & Pricing Simulator (Retail Domain):** Designed a data-driven framework to simulate pricing and promotional impacts across key SKUs, identifying optimal promo combinations for pilot implementation and aligning with business uplift goals.
- **Promo Effectiveness Analysis:** Developed baseline and lift modelling for promotional events, leading to a ~20–25% decrease in inefficient spending and improving ROI benchmarks across targeted campaigns.
- **Product/Item Matching:** Built an NLP pipeline to automate SKU alignment across vendors and platforms, improving match accuracy to 65% and saving ~250–300 hours annually in manual reconciliation.

INCEDO TECHNOLOGY SOLUTIONS LIMITED

Senior Data Scientist | Feb 2021 – May 2023 | Bengaluru, India

- **Demand Forecasting (CPG):** Created machine learning models to improve forecast precision by ~10%, enabling better supply chain alignment and reducing excess inventory costs, with estimated savings of \$200K–\$300K/year.
- Enterprise Data Service Workbench (Finance): Led the development of a self-service analytics platform for RFP support, increasing proposal throughput by ~40–50% and reducing average turnaround time.
- Client Cohort Analysis: Delivered behavioural segmentation for investor profiling, aiding in targeted engagement strategies that led to a ~10% lift in RFP conversion rates and enhanced quarterly revenue by ~20%.
- **Investment Director Performance Dashboard:** Developed a retrospective portfolio insights dashboard tracking KPIs across advisory/discretionary channels, improving transparency and decision support for directors.

ZS ASSOCIATES INDIA PRIVATE LIMITED

Decision Analytics Associate | Jan 2020 – Jan 2021 | Pune, Karnataka

- **Survival Analysis (Pharma):** Applied time-to-event modelling to predict therapy switch patterns, contributing to a ~15–20% reduction in patient churn and improving client engagement strategy.
- **New Patient Adoption Modelling:** Built ML models to rank HCPs by likelihood of prescribing new therapies, leading to improved sales force effectiveness and a ~25–30% reduction in targeting costs.
- Marketing Mix Modelling: Streamlined regression-based Market mix model processes, reducing model delivery cycles by 30–40% and identifying high-ROI promotional levers, contributing to a ~10–15% marketing ROI lift.

Research | Professional Skill Development

- Advancing Causal Video Question Answering: Developed Transformer-based deep learning models for accurately analyzing and interpreting multi-modal video-text data, enhancing Al-driven understanding of complex video content and context.
- Michigan Farm to Institute (MFIN): Conducted comprehensive data-driven analyses, generating actionable insights to support effective outreach strategies and foster institutional adoption of locally sourced food systems.
- Foundational Degree in Data Science and Programming, IIT Madras: Selected among the first cohort to complete an innovative online degree covering foundational concepts in Data Science, Machine Learning, and Programming
- Certified Cloud Practitioner & Machine Learning Specialty, AWS: Enrolled in certification programs on demand to enhance Cloud and ML skillsets

Skills

- Programming languages and scripting: Python, R Programming, Awk, Bash, SQL, MATLAB
- Machine Learning and AI: Statistical Modeling, Time Series Analysis, Demand Forecasting, Pytorch, TensorFlow, Natural Language Processing(NLP), and Generative AI (NLG)
- Cloud & Big Data Technologies: AI/ML and Deployment services of Azure, Amazon Web Services (AWS), Google Cloud Platform (GCP), PySpark
- Web Development & Deployment: Flask (Back-End), Vue.js, HTML, CSS (Front-End), Fast API (Backend), Vercel, Streamlit
- Analytics & Platforms: GIT(Version Control), Advanced Excel, MS PowerPoint, Database Management Systems, Tableau, Big Query
- Agentic AI frameworks & workflows: LiteLLM, MCP(Model Context Protocol), Lang Chain, RAG, Autonomous task orchestration, agent Benchmarking