N. Sai Dhanush

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PROFESSIONAL SUMMARY

Result driven Data Scientist with a strong foundation in data analysis, Machine Learning, and problem solving. Adept at leveraging advanced analytics and data science methodologies to solve complex business problems and drive impactful decisions. Passionate about applying data driven insights to enhance operational efficiency and contribute to organizational success.

EDUCATION

Masters in Technology (Data Science) 2021 - 2023
Amrita Vishwa Vidyapeetham Grade: 7.94/10.0

Bachelor of Technology (Mechanical Engineering) 2013 - 2017
Gitam University Grade: 8.26/10.0

Intermediate (Class XII) 2011 - 2013
Narayana Junior College Grade: 9.53/10.0

Matriculation (Class X) 2000 - 2011
Adarsh English Medium High School Grade: 8.33/10.0

EXPERIENCE

Decision Science Analyst May 2024 - November 2024
Accenture *Bangalore*

- **Store Pairing Methodology -** Developed a machine learning model to optimize store deliveries by clustering locations based on proximity, demand, and schedules by **95%** accuracy. Enhanced resource utilization and reduced costs through clustering and optimization. Created Power BI dashboards for real-time operational insights.
- **Inventory Optimization and Analytics Platform -** Developed an inventory optimization solution on the AERA platform, using **SQL, Python**, and rule-based methods for supply chain analytics. Built automated data pipelines and workflows for daily refresh and preprocessing. Integrated machine learning models to generate insights and adjust recommendations based on client feedback
- **Workera Data Science Certification -** Nominated for and completed the highly regarded Workera Data Science Certification, enhancing expertise in advanced data science and machine learning methodologies.
- **Technical Skills and Tools -** Hands-on experience with Python, SQL, Power BI, Excel, OOP, data analysis, data visualization, storytelling, and client engagement, utilizing these skills extensively across various projects in supply chain analytics and data science.

Knowledge Consulting Intern August 2022 - August 2023
Mckinsey Company *Chennai*
Manufacturing and Supply Chain Management (MSC-XTEC)

- Developed a **Python**-based tool with a user-friendly interface to enhance e-commerce supply chain efficiency for North American omni-channel retail customers.
- Focused on streamlining order fulfillment processes with minimal last-mile expenses and improved click-to-delivery timelines.
- Leveraged cutting-edge technologies and data-driven insights to optimize the entire order processing duration, ensuring timely and reliable deliveries.
- Collaborated closely with e-commerce companies, tailoring the tool to address specific challenges and offer superior customer experiences.
- Contributed to portfolio management for select clients and authored an article titled ”Sustainability in Logistics”.

Engineering Assistant October 2019 - July 2020
Andhra Pradesh State Government *Kuppam*

- Worked as Engineering Assistant at Andhra Pradesh Panchayat Raj Department
- Responsible for Smooth Functioning of construction of Govt. Sanctioned Buildings (Renovating School Structure), CC Roads, Public Health Care Centers.
- Cost Estimation and Planning for Sanctioned Govt Projects at Village Level

INTERNSHIPS

Intern June 2016 - August 2016
Hindustan Aeronautics Limited *Bengaluru*

- Understood different Advanced Manufacturing technologies implemented in the process of Making.
- Understood the Ethics behind Liaison Engineering in a Heavy Industry

PROJECTS

Building an AI Research Assistant using AI Agents, April 2025

- Developed an autonomous agent-based app to automatically identify and summarize the top 10 AI research papers from ArXiv for a given date.
- Integrated CrewAI agents for research paper retrieval, ranking, and generation of a structured, visually appealing HTML report.
- Automated end-to-end AI literature review, enabling rapid insights and trend tracking in the AI research domain.

Conversational AI for Website Knowledge Retrieval (Gen AI), (Demo) January 2025

- Built a GenAI-powered support chatbot using LangChain and Pinecone to fetch and respond to user queries over website content.
- Integrated HuggingFace embeddings and vector similarity for contextual search.

Estimating Customer Lifetime Value (CLTV) for Business using Regression Approach, (Demo) January 2025

- Developed a regression-based Customer Lifetime Value (CLTV) prediction model using Beta-Geometric/Negative Binomial Distribution (BG/NBD) for purchase frequency modeling and Gamma-Gamma model for monetary value estimation.
- Leveraged Python and the Lifetimes library to analyze transaction data, forecast revenue potential, and enable targeted retention strategies.

Restaurant Visit Forecasting for Recruit, (Demo) November 2024

- Implemented advanced forecasting models to predict restaurant visitor counts, utilizing ARIMA, Prophet, XGBoost, CatBoost, and LightGBM.
- Conducted rigorous feature engineering, statistical significance testing, and ensemble learning to enhance predictive accuracy.
- Evaluated model performance using RMSLE and delivered actionable insights to support operational planning and resource allocation

Optimizing Marketing Budget Spend using Marketing Mix Modelling (MMM), (Demo) August 2024

- Conducted Marketing Mix Modeling (MMM) for an e-commerce firm to quantify the impact of various marketing channels on sales across three product categories.
- Applied regression analysis and elasticity measurement to assess the ROI of TV, online, and promotional spend.
- Recommended optimal budget reallocation strategies to maximize revenue performance.
- Utilized time series transformation, adstock modeling, and performance attribution techniques using Python.

Bank CRM Analysis using MySQL Power BI, (Demo) February 2024

- Developed and optimized complex SQL queries to analyze bank CRM data, identifying key customer segments and behavioral patterns.
- Built ETL data pipelines for extracting, transforming, and loading large transaction and interaction datasets for business intelligence.
- Generated actionable insights on customer retention, cross-selling opportunities, and risk mitigation to enhance customer experience and revenue growth.

Columbia Asia Hospitals Health care Analytics Using PowerBI, (Demo) December 2023

- Designed and developed an interactive Power BI dashboard, integrating multi-source healthcare datasets to provide holistic operational insights.
- Automated KPI tracking for hospital admissions, revenue, occupancy rates, and department-wise performance.
- Enabled data-driven decision-making by visualizing trends, identifying inefficiencies, and supporting resource allocation through real-time reporting.

Credit Card Fraud Detection for Vesta, (Demo) February 2023

- Developed a credit card fraud detection model using classification algorithms including Logistic Regression, Random Forest, and XGBoost.
- Performed feature engineering, addressed class imbalance, and optimized model performance using evaluation metrics such as AUC and precision-recall.
- Leveraged Python (Pandas, scikit-learn) for end-to-end implementation.
- Enabled early identification of fraudulent transactions to minimize financial loss and enhance transaction security.

Bearing Fault Diagnosis, (Demo) January 2023

- Implemented Machine Learning and Deep Learning Approaches to tackle the NASA's Bearing data (Time series)
- Converted this raw data into a Supervised Learning problem with the aid of EDA and Feature selection. Posed as a Multi-Class Classification Problem.

CERTIFICATIONS

FY25 Decision Science Core I, Workera (Link) November 2024

- Skills acquired: AI Explanability, Business Analytics, Advanced Data Visualization and CHATGPT

Professional Certification in Data Science, Newton School (Link) December 2023

- Procured with rigorous training in Excel, Power BI, and SQL, equipping with essential tools for data manipulation and visualization. Built a solid foundation in data analysis to derive valuable insights from diverse datasets.

Machine Learning Specialization, Coursera (Link) June 2023

- Mastered key concepts of Supervised and Unsupervised learning, recommender systems, and reinforcement learning. Gained practical skills in building and deploying machine learning models to solve real-world problems.

SKILLS

Computer Languages: Python, Machine Learning
Data Tools: Power BI
Software Packages: MySQL, Excel, Matplotlib
Soft Skills: Communication Skills
Others: Jira, Analytics, Spreadsheet