

HIRTHICK S

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Profile Summary

- Expert in analyzing large datasets, optimizing SQL queries, and transforming data into actionable insights for business decisions
- Proficient in creating interactive Power BI dashboards, enhancing data accessibility and understanding.
- Expertise in Python, SQL, statistical modeling, deep learning, and NLP for solving real-world challenges.
- Developed AI-driven tools for cyberbullying detection, fraud analysis, and customer behavior prediction across industries.

Relevant Coursework

- | | | | |
|----------------------|------------------------|---------------|----------------------------|
| • Machine Learning | • Deep Learning | • Docker | • AWS |
| • Data Visualization | • Statistical Analysis | • Data Mining | • Business Impact Analysis |

Experience

Gateway Software Solutions - Machine Learning Engineer

May 2024 - December 2024

- Developed an NLP-based cyberbullying detector using machine learning and neural networks (MLP), incorporating sentiment analysis, text classification, and keyword filtering to identify harmful content with 90%+ accuracy.

IIIT Allahabad - Data Science & Analytics Intern

June 2024

- Developed predictive machine learning and ensemble models to predict startup success, leveraging advanced analytics, feature engineering, and automated real-time pipelines for optimized model deployment.

Projects

AI-Powered Medical Healthcare System / *Deep Learning, TensorFlow* / [GitHub Repository](#)

Dec 2023

- Developed a multi-disease diagnostic system using CNN and transfer learning to detect Alzheimer's, brain tumors, COVID-19, diabetes, heart disease, pneumonia, and skin cancer. Implemented Explainable AI with LoRA for efficient model optimization.

Object Detection & Tracking with YOLOv8 / *Computer Vision* / [GitHub Repository](#)

Sep 2023

- Implemented a real-time object detection and tracking system using YOLOv8, achieving high accuracy and fast processing for efficient object identification in images and videos.

AI-Driven Agricultural Farming System / *Machine Learning, Deep Learning, Flask* / [GitHub Repository](#)

Sep 2024

- Built a web-based agricultural platform using ML and DL to provide crop recommendations, fertilizer optimization, and plant disease detection. Incorporated AI-powered suggestions to enhance farming productivity and sustainability.

Barista Cafe Business Dashboard / *Excel, Power BI, Business Analytics* / [GitHub Repository](#)

Mar 2025

- Built a Power BI dashboard for Barista Cafe using Excel and CSV data to improve sales, inventory, and customer insights. Optimized performance with DAX Studio and delivered actionable visualizations.

Book Chapters & Conference Publications

Brain Tumor Classification Using Deep Learning – [IET Digital Library](#)

Aug 2024

- Authored a book chapter in Deep Learning in Medical Image Processing and Analysis, detailing deep learning techniques for accurate brain tumor classification.

Deep Learning Advancements in Malaria Diagnosis – [IGI Global](#)

Oct 2024

- Designed and optimized a PyTorch-based CNN model for malaria diagnosis, implementing GPU-accelerated training with advanced data augmentation and transfer learning techniques to achieve clinical-grade detection performance.

Software Startup Success Prediction Using Machine Learning – [IEEE INCOWOCO](#)

Feb 2025

- Developed machine learning models for predicting startup success, leveraging feature engineering and predictive analytics. Partnered with experts to explore advancements in AI-driven decision-making.

Technical Skills

Languages & Frameworks: Python, C++, SQL, Flask, Streamlit, TensorFlow, PyTorch, LangChain, Pandas, NumPy

Data Science: Predictive Analysis, CNN, RAG, LLM Implementation, Statistical Analysis, Feature Engineering

Tools & Databases: Git, Jupyter Notebooks, Power BI, Tableau, MySQL, MongoDB, Vector Databases

Education

Thiagarajar College of Engineering

Aug 2021 – May 2026

Master of Science (Integrated) in Data Science – CGPA: 8.28

Madurai, Tamil Nadu