HIRTHICK S

Madurai, Tamil Nadu

📞 +91 7530053910 🔗 hirthick-portfolio.netlify.app ✉ hirthicksofficial@gmail.com in linkedin.com/in/hirthicks 🔗 github.com/Hirthick6

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*