

# Nischal Chandur

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## Technical Skills

**Machine Learning & AI:** TensorFlow | Keras | Scikit-learn | PyTorch | HuggingFace | OpenCV | LangChain | SpaCy | NLTK  
**Statistics & Mathematical Modeling:** Bayesian Inference | Causal Inference | Hypothesis Testing | Simulation Testing  
**Programming Languages:** Python | R | MATLAB | C/C++ | Go | Node.js  
**Databases & Big Data:** PostgreSQL | MySQL | MongoDB | FAISS | ChromaDB | Pinecone | Snowflake | Apache Spark  
**Cloud Computing & Dev Ops:** Amazon Web Services (AWS) | Microsoft Azure | Databricks | Docker | Git/GitHub  
**Other Tools:** PyTesseract | Streamlit | Flask | Gin | Fiber

## Professional Experience

**Data Science Graduate Intern**, Ecolab – Naperville, IL, USA Jun 2024 – Aug 2024

- Enhanced anomaly detection models for cooling towers by integrating ARIMA and k-shape clustering, boosting precision by 32%, leading to proactive issue identification and reduced maintenance costs.
- Developed a high-throughput synthetic data generation algorithm in Python, simulating 10,000+ sensor readings per second to create realistic operational test cases, strengthening model robustness.

**Machine Learning Engineer**, Reworked.ai – Miami, FL, USA Apr 2024 – May 2024

- Designed a hybrid ML pipeline combining Bayesian decision models and ensemble learning to predict solar panel installation likelihood, optimizing lead targeting and reducing marketing costs.
- Implemented a data-driven lead acquisition strategy using neighborhood-specific scoring, improving conversion rates by 17%, increasing sales efficiency, and refining customer segmentation.

**Data Scientist**, Latlong (ONZE Technologies Pvt. Ltd.) – Bengaluru, KA, India Sep 2022 – Jun 2023

- Automated multilingual data extraction using PyTesseract OCR, enabling demographic analytics across multiple Indian regions, improving decision-making for location-based insights.
- Developed a Python-QGIS visualization platform to identify underperforming geographic areas, empowering financial and automotive firms to optimize resource allocation.
- Integrated geo-spatial intelligence into key business performance indicators, leading to strategic expansions for clients.

## Academic Projects

**Lorekeeper** – University of Maryland, College Park Aug 2024 - Dec 2024

- Developed a Retrieval-Augmented Generation (RAG) model using LangChain, HuggingFace, and FAISS, improving text retrieval accuracy by 28% for large-scale literary corpora from The Lord of the Rings and The Hobbit.
- Built an interactive Streamlit interface, enabling seamless user queries and real-time knowledge retrieval, enhancing accessibility for literary research. [github.com/nchandur/lorekeeper](https://github.com/nchandur/lorekeeper)

**Sign Language Recognition & Translation** – University of Maryland, College Park Mar 2024 - May 2024

- Engineered a real-time sign language recognition model using a custom CNN, achieving 96% accuracy, improving accessibility.
- Designed a Flask-based web app, enabling global access to gesture recognition and text-based fingerspelling translation for real-time communication. [github.com/nchandur/sign-language](https://github.com/nchandur/sign-language)

**NBA Prediction & Analysis Model** – University of Maryland, College Park Aug 2023 - Dec 2023

- Built a predictive analytics pipeline leveraging ensemble learning, achieving 75% accuracy in forecasting NBA game outcomes for data-driven decision-making.
- Developed a real-time Flask dashboard, visualizing key match statistics and game insights, increasing engagement for sports analysts and fans. [github.com/nchandur/NBA-prediction-model](https://github.com/nchandur/NBA-prediction-model)

## Education

**University of Maryland, College Park, MD, USA** Aug 2023 – May 2025

Master of Science in Data Science

**Coursework:** Natural Language Processing | Computer Vision | Big Data Systems | Algorithms for Data Science

**PES University, Bengaluru, KA, India** Aug 2018 – May 2022

Bachelor of Technology in Electronics & Communication Engineering

**Coursework:** Engineering Mathematics | Linear Algebra | Random Processes | Artificial Neural Networks | Pattern Classification