Nischal Chandur

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Technologies

Machine Learning & AI: TensorFlow | Keras | Scikit-learn | PyTorch | HuggingFace | OpenCV | LangChain | SpaCy | NLTK
Programming Languages: Python | R | MATLAB | C/C++ | Go | JavaScript | HTML/CSS
Databases & Big Data: PostgreSQL | MySQL | MongoDB | Snowflake | Apache Kafka
Cloud Computing & Dev Ops: Amazon Web Services (AWS) | Microsoft Azure | Databricks | Docker | Git/GitHub
Other Tools: PyTesseract | FAISS | Streamlit | Flask | Gin | Fiber

Professional Experience

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

- Enhanced *anomaly detection accuracy by 32%* in cooling tower AI models using *ARIMA* and *k-shape clustering*, enabling precise differentiation between normal and anomalous operational patterns.
- Designed a *synthetic data generation algorithm* that produced *10,000+ controlled sensor readings* in 12.5 seconds, improving model validation and boundary testing for *robustness*.

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

- Developed a *hybrid ML model* combining *Bayesian decision models* and *ensemble techniques* to predict solar panel installation likelihood with high accuracy.
- Increased actionable leads for solar panel installations by 17% through neighborhood-specific *likelihood scoring*, driving marketing strategy optimization.

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

- Engineered an *OCR-based data extraction tool* with PyTesseract for *multilingual public documents*, augmenting regional demographic analysis.
- Created a Python and QGIS-based visualization tool to identify *underperforming areas*, delivering *actionable insights* for industries including finance and automotive.
- Improved *operational decision-making* by integrating *geo-spatial data analysis* with business KPIs.

Academic Projects

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

- Built a *Retrieval-Augmented Generation (RAG) model* leveraging LangChain, HuggingFace, FAISS, and Llama3.2:1b to process text from *The Lord of the Rings* and *The Hobbit*.
- Deployed a *Streamlit-based interface* for intuitive querying, response generation, and transparent context display. github.com/chandurnischal/lorekeeper

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

- Created a platform using a *custom CNN* achieving 96% validation accuracy for translating *sign language gestures*.
- Developed a Flask web application for global accessibility with user-uploaded gestures and text input for fingerspelling translation. github.com/chandurnischal/sign-language

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

- Built an *end-to-end pipeline* predicting NBA game outcomes with 75% validation accuracy using *ensemble learning techniques*.
- Deployed a Flask app presenting *daily match statistics* and *win probabilities*. github.com/chandurnischal/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 | Data Representation & Modeling | Communication in Data Science & Analytics

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