

Nischal Chandur

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Summary

Graduate student with a strong foundation in data modeling, computer vision, and NLP, complemented by skills in software development, cloud computing, and database management. Dedicated to making AI accessible and intuitive by bridging the gap between complex AI systems and everyday users through transparent and ethical data usage. Committed to clear and honest data communication to foster trust and understanding across both technical and non-technical audiences.

Experience

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

- **Improved anomaly detection accuracy by 32%** in cooling tower AI models through advanced time series analysis of multi-sensor data (temperature, pH, conductivity); leveraged ARIMA and k-shape clustering techniques to precisely differentiate between normal operational and anomalous patterns.
- **Designed and implemented a synthetic data generation algorithm** that produced over 10000 controlled sensor readings, significantly enhancing model validation and boundary testing; utilized a curated dataset of historical anomalies to ensure comprehensive model robustness and reliability under varied scenarios.

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

- **Developed a custom hybrid ML model** integrating Bayesian Decision models with random forest classifiers to accurately predict solar panel installation likelihood, leveraging engineered features (age, income, roof area, sunlight exposure) to enhance predictive power.
- **Generated a 17% increase in actionable leads** for solar panel installations by pinpointing high-potential neighborhoods; optimized targeting strategies for residential solar adoption through model-driven likelihood scoring, boosting marketing effectiveness.

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

- **Built a data extraction tool using Pytesseract OCR** to process demographic data from multilingual public documents, integrating results with geo-spatial data for insightful regional analysis.
- **Developed a Python and QGIS-based visualization tool** enabling companies to identify underperforming areas and competitor-dominated regions, delivering actionable insights that boosted operational efficiency and profitability across sectors like finance and automotive.

Projects

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

Developed a sign language recognition and translation platform utilizing a custom CNN that achieved 96% validation accuracy, allowing users to upload gesture images and input text for fingerspelling, all integrated into a Flask web application deployed globally via ngrok. github.com/chandurnischal/sign-language

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

Created an end-to-end data science pipeline that predicts NBA game outcomes using historical data, feature engineering with advanced metrics, and a Random Forest Classifier with 75% validation accuracy, all presented through a Flask web application displaying daily match statistics and win probabilities. github.com/chandurnischal/NBA-prediction-model

Technologies

Machine Learning: scikit-learn | Tensorflow/Keras | SpaCy | NLTK | Pytesseract | OpenCV | Plotly | Matplotlib/Seaborn

Languages: Python | R | MATLAB | Go | C/C++ | HTML/CSS | JavaScript

Databases & Big Data: PostgreSQL | MySQL | MongoDB | Snowflake | Kafka

Cloud Computing & Dev Ops: Amazon Web Services (AWS) | Microsoft Azure | Databricks | Docker | Git/GitHub

Web Development & Frameworks: React.js | Flask | Django | ngrok | Gin | Fiber

Education

University of Maryland, College Park, MD, MS in Data Science Aug 2023 – May 2025

Coursework: Natural Language Processing | Computer Vision | Data Representation & Modeling | Communication in Data Science & Analytics

PES University, Bangalore, India, B.Tech in Electronics & Communication Engineering Aug 2018 – May 2022

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