

# MONISHA PATRO

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## EDUCATION

### INDIANA UNIVERSITY BLOOMINGTON

Masters: Data Science GPA: 3.7/4.0

Relevant Coursework: Statistics, Machine Learning, Advanced NLP, Database Technologies, Information Visualization

United States

August 2023 – May 2025

### VELLORE INSTITUTE OF TECHNOLOGY

Bachelor's: Computer Science and Engineering, GPA: 3.8/4.0.

India

June 2019 – May 2023

## WORK EXPERIENCE

### Candid

Technology Intern

United States

May 2024 - Present

- Developed an AI-powered chatbot using advanced LLMs and provided custom Power BI dashboards tailored to stakeholders' interests, boosting user engagement on Candid.org by 70% and assisting over 7,000 users in efficiently accessing non-profit data.
- Built predictive machine learning models with TensorFlow to forecast non-profit funding trends, achieving an 88% accuracy rate, which informed strategic decisions and boosted funding efficiency by 40%.
- Implemented NLP algorithms to automatically categorize and summarize grant applications, reducing manual review time by 60% and improving allocation accuracy by 35%.

### eProtons

Data Analyst Intern

Remote

October 2022 - February 2023

- Applied deep learning algorithms to optimize EV charging patterns, resulting in a 22% reduction in energy consumption and improving charging efficiency across stations.
- Developed real-time predictive models using PyTorch for demand forecasting, enhancing grid load management and reducing peak energy costs by 18%.
- Implemented advanced anomaly detection using unsupervised learning techniques, identifying potential system failures, and decreasing downtime by 40%.

### Mukham Pvt Ltd

Facial Recognition Authentication System: Data Analyst Intern

India

June 2022 - November 2022

- Developed advanced anti-spoofing algorithms using convolutional neural networks, reducing fraudulent access attempts by 50% and enhancing security for client organizations.
- Integrated geolocation analytics and time-series analysis into access control systems, improving location-based authentication accuracy by 35% and reducing unauthorized access incidents by 20%.
- Optimized facial recognition algorithms using transfer learning techniques, increasing recognition accuracy by 25% under diverse conditions and reducing false positives.

## PROJECTS

- Google Ads Search Optimization Project:** Focused on improving Google Ads' search algorithms to enhance targeting accuracy and ad performance that involved analyzing over 5 million search queries and ad data records using Apache Spark and SQL to refine ad targeting and bidding strategies, thereby optimizing ad relevancy.
- Federated NER for Invoice Optimization:** Developed a federated learning-based Named Entity Recognition system using LayoutLM and Tesseract 4 for efficient invoice processing, achieving significant accuracy.
- Advanced Face Recognition with Deep Learning and HOG:** Developed a face recognition system using the Histogram of Oriented Gradients and DL to enhance identification accuracy. Techniques included facial feature alignment & encoding with neural networks, followed by classification with a linear SVM to match identities efficiently.
- Meta-Kaggle:** Analyzed the meta-Kaggle dataset using Power BI, Matplotlib, ggplot2, and Seaborn to uncover temporal trends in data science practices, languages, and techniques, providing insights into the evolving data science landscape.
- CityLink-RideShare:** Designed and implemented a PostgreSQL database to manage and analyze rideshare data, ensuring efficient storage, retrieval, and validation of ride, user, and transaction details for the CityLink-Rideshare Hub.

## SKILLS

- Languages & Databases:** Python (Pandas, NumPy, Scikit-Learn, TensorFlow, PyTorch, Flask), R, SQL, C#, MySQL, PostgreSQL, MongoDB, Snowflake, Neo4j
- Visualization and Analysis:** Power BI, Tableau, Gephi, Matplotlib, Seaborn, EDA, Statistical Modeling.
- ML/AI:** Causal Inference, Predictive Modelling, Time Series Analysis NLP, Cuda, LLMs, CNN, Deep Learning, Transformers, Keras, spaCy, Reinforcement Learning, ETL Pipelines, pySpark, Anomaly Detection.