

NUPUR ABHIJIT DASHPUTRE

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LinkedIn | Portfolio | GitHub

EDUCATION

University of Southern California <i>Master of Science in Computer Science – Data Science</i> Related Coursework: Analysis of Algorithms, Database Systems, Applied NLP	Los Angeles, CA Expected Graduation – May 2026
MIT – World Peace University <i>Bachelor of Technology in Computer Science Engineering</i> Related Coursework: Data Structures, Distributed Computing, Machine Learning, Data Mining	Pune, India August 2020 – June 2024

TECHNICAL SKILLS

Languages and Frameworks: Python, C++, Java, JavaScript, SQL, React, Flask, LangChain
Databases and Libraries: PyTorch, Tensorflow, Numpy, Pandas, Scikit-Learn, OpenCV, MySQL
Tools and Techniques: Git, HuggingFace, TensorFlow Lite, Tableau, PySpark, Kafka

PROFESSIONAL EXPERIENCE

Rolls Royce Power Systems AG <i>Data Analyst Intern</i>	Pune, India January 2024 – June 2024
<ul style="list-style-type: none">Built a time-series regression model to forecast component lifespan, reducing operational risk and optimizing predictive maintenance.Performed data cleaning and EDA across sensor logs; achieved RMSE of 0.05 and delivered insights to executive stakeholders.	

PUBLICATIONS & PRESENTATIONS

An Efficient IoT-Blockchain Sharding Technique using Frequently Transacting Sender and Receiver Information | IEEE | 2024
Designing a Machine Learning-Based Intelligent Indoor Navigation System for People with Physical Disabilities | BTH | 2023
Artificial Intelligence Application in Personalized Fintech | Kepes Journal | 2023

PROJECTS

Speech Emotion Recognition for Enhanced AI Assistant Experience	January 2025 – April 2025
<ul style="list-style-type: none">Built a multimodal AI system using CNN + BiLSTM (audio) and DistilBERT (text), reaching 97.27% and 92% accuracy respectively.Integrated with LLaMA 2 to deliver personalized, emotion-aware user responses—demonstrating end-to-end model deployment.	
Reinforcement Learning-based ‘Go’ Game Playing Agent	September 2024 – November 2024
<ul style="list-style-type: none">Implemented Q-learning and Alpha-Beta Pruning to simulate strategic gameplay on a constrained 5x5 board.Reduced state-space by 75%, improving training efficiency and decision quality.	
Real-time Pothole Detection	September 2024
<ul style="list-style-type: none">Trained and deployed YOLOv8m for real-time pothole detection with webcam integration and high inference performance (mAP: 0.788).Built modular pipeline for object detection—simulating potential smart city applications.	
Alzheimer’s Disease Detection	February 2024 – May 2024
<ul style="list-style-type: none">Engineered ML workflows in Python and SQL for structured biomedical data; improved diagnostic precision with XGBoost (94.7% accuracy).Performed data curation and feature selection to boost pipeline efficiency and model interpretability.	

EXTRA-CURRICULARS

Team Member, Society of Women Engineers	December 2024 – Present
<ul style="list-style-type: none">Organized outreach campaigns to increase STEM participation; led content creation that boosted engagement by 30%.	