NISHANT UDAY DALVI

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Education

Illinois Institute Of Technology, IL   January 2024 – December 2025
Masters in Computer Science

University of Mumbai, India   August 2019 – May 2023
Bachelor of Engineering in Computer Engineering

Technical Skills

Programming & Scripting: : Java, Python, C, C++, R, JavaScript, SQL
Web & App Development: React, Next.js, Node.js, Flask, Django, Gradio
Development Tools & CI/CD: AWS (S3, EC2, CloudWatch, RDS), Docker, Kubernetes, Jenkins, GitHub, Ansible
Databases: MySQL, PostgreSQL, MongoDB, Sanity
Machine Learning & Data Science: NumPy, Pandas, Scikit-learn, Matplotlib, TensorFlow, Keras, OpenCV, Hugging Face Transformers, ONNX, YOLO, Power BI
Generative AI & LLMs: OpenAI GPT-4o-mini, Langchain, Retrieval-Augmented Generation (RAG), QLoRA

Work Experience

Software Developer Intern, Sahu Technologies, Pvt. Ltd, Mumbai, India   June 2022 - August 2022
- Deployed cloud-native services using AWS EC2, S3, RDS, and CloudWatch, cutting infrastructure costs by 35% through optimized provisioning.
- Built CI/CD pipelines with Jenkins, Docker, and Terraform, reducing deployment time by 40%.
- Monitored system health and logs with AWS CloudWatch, proactively detecting and resolving bottlenecks and failures.

Junior Software Developer Intern, Dcodetech, Mumbai, India   Feb 2021 – May 2021
- Developed full-stack web applications using React, Node.js, MongoDB, and Express, improving page speed by 20% and user retention by 25%.
- Designed responsive UIs and reusable components, reducing frontend defects by 15% through clean HTML/CSS and JavaScript.
- Integrated REST APIs and implemented features in weekly Agile sprints, improving delivery speed by 20%..

Projects

AI Agent Routing System – Northwestern Memorial Hospital
- Built a LangGraph-based multi-agent system simulating real-time patient query routing across 6 departments using GPT-4 agents and prompt-driven classification.
- Achieved 100% routing accuracy on 50+ healthcare test cases with sub-1.5s latency, using RAG-style coordination and LangGraph StateGraph.

Sustainable Festival Travel Analysis (LinkedIn Post Link)
- Analyzed 20K+ records using Power BI and R, identifying petrol cars as 81% of CO_2 output and suggesting 12.8M kg reduction via carpooling.
- Built a DAX KPI dashboard and an XGBoost model ($R^2 = 0.998$) to guide sustainable travel decisions; recognized with a virtual certificate.

Prohibited Item Detection in Airport Baggage
- Trained a YOLOv8 model on 7,000+ labeled X-ray images to detect restricted items in baggage with enhanced object recognition.
- Increased threat detection accuracy by 30% and reduced false positives by 25%, aiding airport security operations.

Achievements & Competitions

1st Place – AWS Jam US-West Regional (LinkedIn Post)   2024
- Won regional AWS Jam by solving real-world DevOps challenges; advanced to nationals representing Illinois Tech.
- Collaborated with peers from UIC to implement cloud solutions under strict time constraints using AWS services.

GrowBud – AI-Powered Smart Gardening App (Github Link) ScarletHacks Hackathon — 2025   2024
- Built a working MVP in 24 hours using React Native, Node.js, TypeScript, and PostgreSQL, integrating weather APIs and a custom AI model.
- Helped users improve plant survival in low-light settings with personalized plant care, showing measurable user engagement and impact.

Evolution of NFTs & NFT Marketplace   2023
- TIJER - International Research Journal, ISSN: 2349-9249, Vol.10, Issue 4, pp. 242-256, April 2023
- Co-authored a peer-reviewed paper exploring NFT trends, blockchain ecosystems, and digital asset trading platforms.