

Md Norul Gofran

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Erlangen, Germany (Open to relocation) | Job Seeker (Section 20 AufenthG) - Full work authorization

Education

Friedrich-Alexander-Universität (FAU) Erlangen-Nürnberg <i>Master of Science (M.Sc.) in Data Science</i> • Master Thesis: “Reinforcement Learning-based optimal control for HVAC systems.” • Major: Machine Learning	Erlangen, Germany Oct. 2022 – July 2025
Gujarat Technological University <i>Bachelor of Engineering (B.E.) in Computer Engineering</i> • Bachelor Thesis: “Deep Reinforcement Learning Based Music Recommendation System” • Award: ICCR Scholarship - Competitive full-ride grant awarded by the Indian Council for Cultural Relations.	Ahmedabad, India Aug. 2016 – Aug. 2020

Experience

Student Researcher <i>Schaeffler Technologies AG & Co KG</i> • Designed and benchmarked RL controllers (AC, SAC, TD3) for industrial Vapor-Compression Cycle systems • Achieved 15% energy efficiency improvement with TD3 agent over traditional PID control • Authored comparative analysis thesis on adaptive HVAC-R control using model-free RL	Nov. 2024 – July 2025 Herzogenaurach, Germany
Junior Software Engineer <i>DataSoft Systems Bangladesh Limited</i> • Developed Python backend microservices to process high-frequency IoT sensor data, reducing latency by 20% • Implemented OpenCV for a “Smart Traffic Solution” pilot to optimize signal timing based on vehicle density • Engineered an automated anomaly detection pipeline to identify machinery faults, ensuring 99.9% uptime • Collaborated in a Japan-Bangladesh team under strict CMMI Level 5 coding standards	Jan. 2021 – May 2022 Dhaka, Bangladesh

Projects

AutoFlow - AI Agent Platform <i>Python, Flask, LangChain, PostgreSQL, Redis</i> • Built a production-scale LLM system (LangChain, ChromaDB) with RAG for real-time multi-tenant requests • Deployed a high-throughput ML pipeline (Redis, Celery, PostgreSQL) achieving sub-400ms latency • Implemented robust observability via Sentry to ensure system stability and maintain 99.9% uptime	Oct. 2025 – Feb. 2026
Aurora Watch Pro <i>React, TypeScript, Node.js, XGBoost, Docker</i> • Deployed a self-hosted, Dockerized full-stack prediction API with zero downtime and Sentry monitoring • Engineered an XGBoost ensemble model trained on geomagnetic data to output real-time aurora probability scores • Shipped native Android app to Google Play via Capacitor, integrating AdMob and in-app purchases	Dec. 2025 – Jan. 2026
Route Planning for the Visually Impaired <i>Python, PyTorch, DeepLabv3+, OpenCV</i> • Developed an AI-powered navigation system combining Valhalla API GPS routing with real-time computer vision • Trained and fine-tuned a DeepLabv3+ (ResNet50) semantic segmentation model on Cityscapes and Mapillary datasets, achieving 83% mIoU for sidewalk detection	Oct. 2023 – Feb. 2024

Technical Skills

Languages: Python, JavaScript, TypeScript, MATLAB, SQL
Deep Learning & GenAI: PyTorch, LangChain, RAG, sentence-transformers, OpenCV
RL & Machine Learning: DQN, SAC, TD3, Actor-Critic, scikit-learn, NumPy, Pandas
Backend & MLOps: Flask, Express.js, REST APIs, Celery, Docker, Git, GitHub Actions, AWS, Sentry
Databases & Vector Stores: PostgreSQL, SQLite, Redis, ChromaDB, FAISS
Frontend and Mobile: React, React Native, Tailwind CSS
Natural Languages: English (C1 Fluent), Deutsch (B1 Intermediate)