Dhwani Nileshbhai Purohit

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Education

Universität Paderborn **Paderborn, Germany**
Master of Science in Computer Engineering *Oct 2025 – Present*
Coursework: Advanced Computer Architecture, Data Driven Engineering, Advanced System Theory

Government Engineering College, Gandhinagar **Gujarat, India**
Bachelor of Engineering in Electronics and Communication Engineering (CGPA: 8.77/10.0) *Jun 2019 – Jul 2023*
Coursework: Digital Signal Processing, Control Systems, Wireless Communication, VLSI Design

Experience

Tata Consultancy Services **Gujarat, India**
Migration Analyst *Nov 2023 – Present*

- Optimized cloud-to-cloud migration pipelines achieving 45% reduction in query execution time and 35% decrease in infrastructure costs, enabling faster data transfers and improved system performance through strategic pipeline design and resource allocation
- Implemented comprehensive data validation framework achieving 45% increase in data match hit ratio and 93% reduction in lookup time, ensuring data accuracy and integrity through advanced schema analysis and intelligent mapping techniques
- Executed zero-loss migrations across 100+ databases with 100% data integrity, minimizing system downtime and business disruption through robust testing protocols while maintaining strict compliance with security and privacy standards

Space Applications Centre, ISRO **Gujarat, India**
Research Intern *Feb 2023 – Jul 2023*

- Engineered DSP-based signal processing systems achieving 99% signal recovery rate across 50+ satellite channels, enabling reliable down conversion and data recovery for mission-critical operations through advanced filtering and demodulation techniques
- Developed phase-locked loop (PLL) algorithm achieving 25% reduction in positioning error and sub-meter accuracy, improving satellite navigation precision for real-time Doppler tracking applications
- Implemented adaptive filtering and carrier tracking algorithms achieving 35% improvement in signal stability and 40% reduction in signal loss, delivering production-ready solutions for noisy communication environments

InfiniumDevIO LLP **Gujarat, India**
IoT Arduino Intern *Jun 2022 – Jul 2022*

- Built multi-sensor IoT monitoring system achieving 80% reduction in manual overhead and monitoring 10+ environmental parameters, automating real-time data acquisition and alerting through Arduino Uno integration and cloud connectivity
- Optimized sensor responsiveness achieving sub-100ms reaction time and 95% event detection accuracy, improving system reliability through interrupt-driven processing and optimized event logic for environmental monitoring applications

Projects

Smart Stove Safety System (IoT-Based) | *Arduino Uno, IoT, Sensors, Embedded Systems* **2022**

- Developed sensor-based stove safety system achieving 99% gas leak detection accuracy and preventing 100% of potential hazards, implementing automatic shutdown mechanism and real-time SMS/email alerts through integrated sensor fusion and IoT connectivity
- Implemented event-driven automation achieving sub-100ms response time and 90% reduction in emergency response delay, improving household safety through optimized interrupt handling and fail-safe protocols

Skills & Certifications

Certifications: Google Professional Cloud Architect (May 2024), Google Cloud Associate Cloud Engineer (April 2024), AWS Developer Associate (May 2024)

Programming & Cloud: Python, Java, C, SQL, Verilog, VHDL, HTML, CSS, GCP, AWS, BigQuery

Data & Visualization: MATLAB, Simulink, Jupyter, Multisim

Hardware & Embedded: Xilinx Vivado, Keil, Arduino, DSP

Languages

English (C1) | German (B1) | Gujarati (Native) | Hindi (Native)