

NISHANT MANCHANDA

Software Engineering Manager

PROFESSIONAL SUMMARY

Experienced AI and Technology Leader with 9+ years of Experience in Developing Full Stack Scalable and Secure Software Solutions and Growing Teams to deliver high quality software.

EMPLOYMENT HISTORY

ENGINEERING MANAGER

Microsoft Corp

Jul 2024 - Present

Redmond, WA

- ◆ Leading a team of 10 engineers, delivering client facing apps, cloud services and AI solutions for device supply chain.
- ◆ Lead the Delivery of Consumer Facing Applications for Device Diagnostics (Surface Repairability Tool) as well as backend cloud infrastructure for Telemetry Ingestion and Cloud Software Deployment.
- ◆ Delivered 3 Production AI Applications assisting in Enterprise QnA Capabilities over Devices Manufacturing Data, Performing Semi-Autonomous Actions for Data Updates improving, catering to more than 500 internal users with 50% Stickiness Rate.
- ◆ Increase GitHub Copilot adoption, achieving highest PR completion in Windows Devices Org.
- ◆ Reduced infrastructure costs by **\$4.8M annually** through implementing Zero Trust Architecture in Supply Chain Services through software implementation of Microsoft Intune Conditional Access and Azure ARC Based Secure Auth.
- ◆ Overseeing software delivery for Manufacturing Services (10+ Microservices), **supporting 15M+ devices annually**, ensuring 99.999% SLA, 800M requests annually.
- ◆ Conducted Hiring and Upskilling Activities for team, achieving 100% upskilling in Core Azure AI Technologies and Retaining 100% Top Talent.
- ◆ Digital Resiliency Lead within Devices Supply Chain, Reducing Risk Profile for \$5B Dollar business by collaborating with C-Suite Executives across Microsoft Devices, Tier 1 Manufacturers and F&L (Fulfillment and Logistics) Suppliers.
- ◆ **Technologies Used** – Azure Foundry, Azure PasS Offerings, Azure Devops, M365 Teams Toolkit for Agents, Microsoft Intune, Azure ARC

SENIOR SOFTWARE ENGINEER/ARCHITECT

Microsoft Corp

Apr 2022 - Jul 2024

Redmond, WA

- ◆ Lead Architect for Cloud Services for Devices Supply Chain, oversaw 250+ Service Endpoints and incremental feature deployment in Azure, aligned with Microsoft's WAF (Well-Architected Framework) leading to >70% Increase in Modularized Code.
- ◆ Designed Developed MLOPS infrastructure in Azure (Azure ML, AKS Clusters for Inference Hosting) for fraud detection, laying foundation for Secure MLOps within Devices Supply Chain.
- ◆ Designed and Implemented Cloud Infrastructure using Infrastructure as Code for FEDRAMP DOD IL4 Azure Gov Instance, bringing up more than 10 cloud services handling 1M Requests Daily with 99.995% SLA.
- ◆ Developed a cloud-native configuration management service from the ground up, enabling the administration of manufacturing limits in accordance with the Manufacturing Change Review process.
- ◆ **Technologies Used** – .NET Stack, AKS, Azure Front Door, WAF, Virtual Networks, Cosmos DB, SQL DB, Azure ML Studio, Python

SOFTWARE DEVELOPMENT ENGINEER 2

Microsoft Corp

Aug 2021 - Apr 2023

Redmond, WA

- ◆ Developed a dynamic Rust-based MQTT Metrics Collector that enabled efficient export of IoT Edge device data to Azure IoT Hub's Log Analytics workspace. Collector 50% more efficient in Memory Usage and 33% Smaller in Size Footprint.
- ◆ Developed a global validation that certifies IoT Edge compatibility on custom OS/hardware and aids engineers in resolving IoT Edge issues.
- ◆ Automated integration tests with GitHub Actions, reducing bugs and regressions by 30%.
- ◆ **Technologies Used** – RUST, Bash, GitHub Code spaces, GitHub Actions, YAML Pipelines.

SOFTWARE DEVELOPMENT ENGINEER

Mar 2019 - Aug 2021

Microsoft Corp

Redmond, WA

- ◆ Led development of test hardware for HoloLens, Xbox, boosting product quality.
- ◆ Built .NET libraries for cloud communication, expanding factory scope.
- ◆ Developed C# software for automated testing, producing over 10M devices.
- ◆ Created reusable libraries for hardware control, enhancing scalability.
- ◆ Implemented 90% test coverage, improving code reliability with Azure DevOps.
- ◆ **Technologies Used** – C#, C

FIRMWARE ENGINEER

July 2017 - Feb 2019

CALAMP Corp

Carlsbad, CA

- ◆ **Embedded Development:** Key developer of firmware for **Next Generation Telematics devices** in a resource-constrained, multi-threaded environment.
- ◆ **Data Optimization:** Designed and developed **smoothing algorithms** (C/MATLAB) to improve vehicle fuel data accuracy, contributing to **increased sales revenue**.
- ◆ **Loss Minimization:** Architected a **FreeRTOS buffering algorithm** for co-processor communication, **minimizing data loss at startup by 97%**
- ◆ **Ignition Detection:** Developed **Median Filter firmware** using **DSP Sampling** for accurate vehicle ignition detection based on alternator noise.
- ◆ **Power Efficiency:** Developed and implemented power saving strategies on ARM microprocessors, reducing power consumption by 87% compared to legacy devices.
- ◆ **Technologies Used** – C, Jira, FreeRTOS, Ubuntu

EMBEDDED SOFTWARE ENGINEER

September 2016 - June 2017

Tata Consultancy Services

Carlsbad, CA

- ◆ **Safety-Compliant Development:** Developed safety-compliant embedded software in C and MATLAB for hybrid motor control systems.
- ◆ **Core Functionality:** Wrote code in Embedded C and MATLAB for key motor control functionalities, including communication, diagnostics, and signal processing.
- ◆ **Hardware Integration:** Responsible for **hardware bring-up** via bootloader configuration and developing **device drivers** for SPI communication using Embedded C.
- ◆ **Standards Compliance:** Ensured all developed code adhered to **MISRA Guidelines** and **ISO 26262 Functional Safety Requirements**.
- ◆ **Code Quality/Optimization:** Optimized motor control application code using MATLAB to align with MISRA guidelines, resulting in a **reduction in guideline violations**.
- ◆ **Technologies Used** – C

EDUCATION

MASTER OF SCIENCE IN ENGINEERING MANAGEMENT (2016)

University of California, Irvine

Irvine, CA

BACHELOR'S IN ENGINEERING, ELECTRICAL AND ELECTRONICS ENGINEERING (2015)

Panjab University

Chandigarh, India

SKILLS

Agentic Systems Development, C#, Rust, Embedded C, Bash, Python, PowerShell, Cosmos DB, SQL, Win UI, Blazor, WPF, Kubernetes, Docker, Azure Functions, Azure DevOps, Team Leadership, AI Strategy, Cloud Security, Zero Trust Architecture, Azure Security