

Malhar Patil

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SUMMARY

Computer Science graduate student seeking 2026 SWE roles, with experience in systems programming, backend development, and real-time data integration, delivering measurable impact including 85% cost reduction and 200+ record recovery.

EDUCATION

University of Southern California (USC)

MS | Computer Science (Scientists and Engineers) | F1-Student

Los Angeles, California

January 2025 - December 2026

MIT World Peace University (MIT-WPU)

B. Tech | Electronics and Communication Engineering

Pune, Maharashtra

December 2020 - June 2024

WORK EXPERIENCE

ASA Assembly Automation Pvt. Ltd.

Software Intern

Pune, Maharashtra

July 2024 - December 2024

- Developed a data acquisition and control system that served as a lightweight alternative to SCADA systems, enabling real-time PLC (Programmable Logic Control) data logging and improving machine reliability in case of HMI (Human Machine Interface) failures in special-purpose machines
- Designed modular configuration logic allowing scalable sensor mapping for new machines, cutting setup time by 50% and reducing implementation costs by 85%

Ateq Systems Analytic India Pvt. Ltd.

Software Intern

Pune, Maharashtra

January 2024 - March 2024

- Developed a data integration application connecting ATEQ VT65 TPMS tool to OEM's backend systems, enabling real-time capture and transmission of vehicle tire sensor IDs and VIN data at automotive rework stations
- Implemented multiple connectivity solutions including SQL Server integration using PyODBC and RabbitMQ messaging with Pika, while incorporating label printing functionality for barcode stickers at production facilities

Canspirit AI

AI/ML Intern

Pune, Maharashtra

July 2023 - December 2023

- Contributed to a cross-platform file metadata collection system to audit file structures across networked computers, supporting both Windows and Linux with MySQL integration for centralized data storage
- Led Linux compatibility efforts and optimized scan performance by 15–20%, reducing execution time for path-specific operations while adding audit logging and multi-mode scanning functionality
- Optimized a lightweight TinyML language classifier using Edge Impulse, achieving 97% accuracy with <1 ms inference latency on Raspberry Pi for real-time on-device language detection

PROJECTS

Linux (Weenix) Operating System Kernel (CSCI 402, USC)

- Implemented kernel subsystems including process and thread scheduling, synchronization mechanisms, Virtual File System (VFS), and virtual memory management in C on x86 architecture, and validated modules against ~500 automated test cases to ensure system stability.

SKILLS AND PUBLICATION

Programming Languages: C/C++, Java, JavaScript, Python

Tools/Technologies: MySQL, SQL Server, MongoDB, RabbitMQ, Express, Docker, Edge Impulse, Google Cloud Platform, AWS (S3, EC2)

Publication: Edge Impulse: TinyML Language Classification Model (IEEE ASIANCON 2024, PCCOER, Pune, Maharashtra)