SHREYASH SHASHIKANT PATIL

9503351049 | shresp3002@gmail.com | linkedin.com/in/shreyash-patil2002 | github.com/Shres0

SUMMARY

Embedded Systems Engineer with hands-on experience in semiconductor-grade automotive Ethernet PHY validation and firmware integration within a production environment. Strong foundation in Embedded C/C++, microcontroller-based systems, board bring-up, and hardware–software integration. Experienced in structured validation workflows, automation, cross-layer debugging, and reliability-focused testing across varied operating conditions. Comfortable working close to silicon, resolving system-level issues, and contributing to maintainable, scalable embedded solutions. Motivated to build robust real-world systems that balance performance, reliability and engineering discipline.

EDUCATION

PG Diploma in Embedded Systems Design | C D A C — Feb 2025 – Aug 2025
Sunbeam Institute of Information Technology — Pune, India
Grade : B

Bachelor of Engineering in Electronics & Telecommunication Engineering | S P P U — July 2020 – June 2024
Pune Vidhyarthi Griha's College of Engineering & Technology — Pune, India
Aggregate CGPA : 7.94

Higher Secondary Examination | H S C — June 2018 – Feb 2020
Sri Chaitanya Junior College — Pune, India
Percentage : 78.62

Secondary School Education | C B S E — June 2017 – May 2018
Sinhgad Spring Dale School — Pune, India
Percentage : 82

KEY SKILLS

Programming Languages : Embedded C, C++, Python, MATLAB
Operating Systems : Linux, Windows, RTOS
Microcontroller & Architecture : STM32 (ARM Cortex-M4), Arduino (AVR), Beaglebone Black (ARM Cortex-A8)
Communication Protocols : UART, I2C, SPI, CAN, Ethernet, HTTP, MQTT, CoAP
Version Control & Collaboration : Git, GitHub, Perforce, Helix Swarm
Development & Debugging : Visual Studio, Vim Editor, Thinlinc, STM32CubeIDE, Arduino IDE
Build & Productivity : CMake, Makefiles, JIRA, Confluence, Microsoft 365, Google Colab
Simulation & Testing : Proteus, Cisco Packet Tracer, GUI Testing

EXPERIENCE

Trainee Engineer – Embedded Systems — Oct 2025 – Present
Ethernovia Inc. — Full-time

- Executed Automotive Ethernet PHY validation and firmware integration for in-house designed products in a production environment
- Ownership of board-level testing and debugging, MDIO-based PHY configuration, firmware flashing, and interoperability (IOP) testing across vendors, link speeds, and roles
- Validated system behavior under automotive temperature conditions, improved test efficiency through automation, and contributed to firmware maintainability through code modularization and refactoring, with all changes verified on hardware

C++ Programming Intern — Aug 2024 – Sep 2024
Pinnacle Labs — Internship

- Developed C++ programs using a task-based approach focused on logic building, debugging, and modular design
- Strengthened problem-solving skills through independent development and deadline-driven delivery

Machine Learning Intern (Python) — Mar 2024 – Apr 2024
YBI Foundation — Internship

- Worked with Python and libraries (NumPy, Pandas, Matplotlib, and Scikit-learn) for data analysis and modeling
- Gained hands-on exposure to ensemble learning techniques and data visualization & applied ML concepts to real datasets

PROJECTS

COVAS – Collision Avoidance and Vehicle Automation System June 2025 – July 2025
Sunbeam, Pune

- Developed a smart vehicle automation and safety system using two STM32F407 microcontrollers and CAN protocol for robust real-time inter-controller communication
- Architected dual-ECU STM32F407 system using CAN protocol for real-time inter-controller communication between Sensor ECU and Control ECU
- Implemented a sensor transmitter node integrating ultrasonic, rain, and temperature sensors, receiver node to decode CAN data and display live readings on Minicom via UART, and trigger safety alerts

Accident Prevention and Vehicle Control System using LiDAR Aug 2023 – Mar 2024
PVGCOET, Pune

- Developed a real-time accident prevention and vehicle control system utilizing LiDAR technology
- Designed algorithms to detect obstacles like potholes and autonomously control vehicle braking, reducing potential collision risks
- Integrated LiDAR sensors with a microcontroller to achieve accurate obstacle detection and precise automatic braking within a specified range
- Achieved outperformer for Track Embedded Systems & IoT in Technovation 2k24 B.E. Project Competition

DoorMate Jan 2023 – May 2023
PVGCOET, Pune

- Designed and developed an IoT-based door lock system leveraging Radio Frequency Identification (RFID) technology
- Enhanced access control by recording and securely storing real-time data for authorized and unauthorized user access
- Integrated IoT capabilities to enable real-time monitoring and analysis of user access logs

LANGUAGES

English, Hindi, Marathi, French (beginner)

HOBBIES & INTERESTS

Cricket, Music, Driving, Cooking, Agricultural Work