Pratul Deshpande

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SUMMARY

E&Tc undergraduate specializing in embedded systems and software development. Proficient in Python, UDS, and Embedded C and fundamentals of Quantum Computing with experience enhancing process efficiency in multinational environments.

PROFESSIONAL EXPERIENCE

Software Development Intern

Lear Corporation **June 2025 - August 2025, Pune, Maharashtra**

- Developed and implemented scalable Python libraries to automate **28+ UDS diagnostic services**, reducing manual testing time by **60%.**
- Engineered and deployed custom python libraries using the **PySTA framework** to expand testing capabilities for multiple **diagnostics test scenarios.**

Technical Intern

Makewell Electronics Services **December 2024 - February 2025, Nashik, Maharashtra**

- Designed, prototyped, and tested 3 variations of a **20-socket tray** for **ATLAS COPCO**, achieving a **98%** quality assurance pass rate and reducing client assembly time.
- Engineered, tested, and validated industrial **PLC systems**, ensuring compliance with performance and safety standards.

SELECTED PROJECTS

AI based IOT System for Monitoring and predictive maintenance of Pulse Jet Bag Filters.

Ionfiltra (Ionisation Filtration Industries Pvt. Ltd.)

- Developed a IoT predictive maintenance system for industrial filters, integrating real-time sensors with an ESP32 and a cloud platform to enhance operational efficiency.
- Designed a cloud dashboard for real-time data visualization and automated alerts, enabling proactive maintenance to significantly reduce equipment downtime.

Diagnostic Library Implementation in PYSTA

Lear Corporation

- Architected a comprehensive UDS based Python library supporting 24+ UDS services, slashing test-authoring time by 60%.
- Standardized testing procedures across multiple teams by developing a consistent and reproducible framework, ensuring high-quality results.

Real-Time Stress Detection System using HRV

PVG's COET&M, Pune

- Led the end-to-end development of a health monitoring system for real-time Heart Rate Variability (HRV) analysis.
- Collected and processed data from 20+ subjects, implementing algorithms that achieved 85% accuracy.

EDUCATION

Bachelor of Engineering in Electronics and Telecommunication

Pune Vidyarthi Griha's College of Engineering, Technology and Management • Pune, Maharashtra

Higher Secondary Certificate (HSC)

Matoshri College of Management and Research Centre • Nashik, Maharashtra • 2022 • 78.83%

Secondary School Certificate (SSC)

New Era English School • Nashik, Maharashtra • 2020 • 90.20%

PEER-REVIEWED PUBLICATIONS

Quantum-Assisted Techniques to Optimize Modern Supply Chain Challenges

National Conference on Recent Innovation in Computer Science and Information Technology (NCRICSIT) 2025 • 2025

Gender-based violence in the Video Games

International Conference on Gender Equality & Women Empowerment (ICGEWE) 2024 • 2024

LEADERSHIP & ACHIEVEMENTS

General Secretary of Students Association

PVG's COET&M, Pune • Telecommunication Engineering Students Association (TESA) • July 2024 - July 2025

- Successfully organized **11 technical** and **non-technical events**, engaging over **2000 students** and leading one of the **most accomplished** association of the institute.

National level competition Finalist

IIT Bombay • National Entrepreneurship Challenge (NEC)) | E-Summit

- Part of the **15 finalists** from my institute to represent Ed-Cell PVG at the NEC organized by **IIT Bombay.**

KEY SKILLS

Programming Languages: Python, Embedded C, C++, SQL
Hardware & Embedded Platforms: Raspberry Pi, ESP32, Arduino, ARM Cortex-M
Tools & Software: MATLAB, Simulink, OpenCV, CANoe, Jira, Git, MySQL, Microsoft Excel, Linux
Design & Simulation: PCB Design (Proteus, KiCad), Circuit Simulation
Quantum Computing: Qiskit
Protocols: UDS (ISO 14229)