SHAURYA THAREJA

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EDUCATION

UNIVERSITY OF PETROLEUM & ENERGY STUDIES   Dehradun, India
Bachelor of Technology   Expected 2027
Major in Computer Science; Minors in Aerospace
Cumulative GPA: 7.6;
Relevant Coursework: Software Engineering; Operating Systems; Algorithms; Artificial Intelligence; Cyber Security; Robotics

WORK EXPERIENCE

PICRAFT TECHNOLOGY PVT. LTD. (Government-backed robotics startup)   Dehradun, India
Research & Development Intern → Chief Technology Officer
Chief Technology Officer   Sep 2024 – Aug 2025
- Lead the **R&D and Technical strategy** for design and development of custom 3D Printers
- Fine tuned the firmware for **3D Printers** making them **75% faster** and **2x accurate**.
- Pitched for the startup at multiple times and managed to raise INR **25lacs+ grants** from multiple **government institutions**.

Research & Development Intern   Mar 2024 – Aug 2024
- Configured **Marlin Firmware** for custom **3D Printers,** also developed a flavour of the **Display Firmware** to match the theme of the startup.
- Implemented **AI Print failure detection** algorithm that reduced the print failure rate by **15%**.

UNIVERSITY PROJECTS

QUADRUPED ROBOT   Aug 2025
- Derived and implemented inverse kinematics algorithms in C++/Python for precise foot trajectory control and gait planning
- Programmed real-time control system for ODrive motor drivers ensuring precise position feedback using encoders.
- Built Arduino-based firmware for communication and motion execution with low-latency response.

CHESS ROBOT   Apr 2025
- Programmed a real time chess playing robot, which uses stockfish algorithm, through Open CV implemented in C++, to detect the player's move and based on that, instructs the robot arm to play from the opposition.
- Implemented the entire Inverse Kinematics equations for the precise movement of the robotic arm.

ACTIVITIES

Cyber Sentinel (Cybersecurity Society)   Dehradun, India
Technical Head   Mar 2025 – Present
- Managed **technical infrastructure** and developed the official event **website**. Awarded **"Best Head"** for outstanding contribution to event execution.
- Organizer and Speaker at the **Python for Cyber Security** workshop, in which interacted with the juniors and touched the aspects of python in cyber security.

WORKSHOPS & CERTIFICATIONS

- Speaker at **ARD-U-KNOW**: Two-day Arduino Robotics Workshop
- Awards in multiple **CTFs** and **robotics competitions (Robowars)**

SKILLS

C, C++, Python, MongoDB, Firebase, Git, Vercel, Inverse Kinematics, Motion Planning, Embedded Systems, Ethical Hacking Fundamentals