Himanshu Sharma

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Education

- **Bachelor of Engineering in Automation & Robotics** — Expected July 2026
  Modern Education Society College of Engineering — *Pune, Maharashtra*
  - **Relevant Coursework:** Robotics IIT-K (NPTEL) & CS50P (Python)

Experience

- **UAV Engineer** — Onsite
  QuantumTechFPV — *Oct - Dec, 2026*
  - Core member of the engineering and build team for end-to-end development and delivery of 10 hexacopter anti-jamming UAVs with fiber-optic primary control and RF (ELRS) failover (5 km range), delivered to an Indian Army battalion in Prayagraj.
  - Performed early-stage assembly including soldering high-current bullet connectors, ESC phase wires, and 6S power distribution, ensuring low-resistance and reliable joints.
  - Developed comprehensive technical and operator manuals for a hexacopter UAV platform with fiber-optic primary control and RF (ELRS) failover, documenting system architecture, ArduPilot baseline configuration, and integration workflows.
  - Standardized pre-flight, failover, and acceptance testing procedures to improve link reliability, recovery safety, and field readiness.
  - Designed battery lifecycle management and BMS tracking framework with audit-grade logging to reduce in-field power failures.
- **Automation Intern** — Onsite
  Spark Minda — *July - September, 2025*
  - Gained comprehensive exposure to Surface Mount Technology (SMT) production line, learning the complete PCB assembly process from laser marking and solder paste printing through automated optical inspection and quality control.
- **Copywriter** — Remote
  cryptoprism.io — *Jan - March, 2024*
  - Worked as a technical content copywriter for a DEX screener SaaS product targeting cryptocurrency users, improving user engagement and product adoption.

Projects

- **DeX: Manipulator** | ***CAD, 3D Printing, ESP32***
  - Built a 5-DOF robotic manipulator with teleoperation using gesture control. Implemented wireless communication via ESP32 and flex sensors for hand tracking, exploring intuitive human-robot interaction.
- **Robot_Mechanics** | ***Python, NumPy, Matplotlib***
  - Developed an open-source Python library implementing core robotics concepts (transformations, kinematics, robot link modeling) from first principles. Designed modular components with unit tests and visualization for validation and clarity.
- **Preview (PDF Viewer)** | ***PyQt5, MuPDF***
  - Built a minimalistic, cross-platform PDF viewer inspired by Evince and Mac Preview using PyQt5 and MuPDF for fast rendering.

Technical Skills

Languages: Python, MATLAB
Tools & Technologies: Figma, LaTeX

Extracurricular Courses

- From Big Bang to Black Holes - Tokyo University (Coursera)
- CS50 Introduction to Python - Harvard University
- CS50 Introduction to Artificial Intelligence - Harvard University

Leadership & Social Engagements

- **Co-founder, Avinya Club:** Founded project-focused club for hackathons and technical development at MESWCOE Pune
- **Technical Head, ASME Student Chapter:** Led technical initiatives and projects as head of American Society of Mechanical Engineering Student Chapter at MESWCOE Pune
- **Event Organizer & Speaker:** Organized various technical events and served as keynote speaker, winning multiple competitions

Interests & Hobbies

Reading: Non-fiction, Evolution, Physics, Philosophy, Astronomy, Science Fiction
Music: Instrumental, Original Soundtracks
Writing: Technical blogs, Poetry, Personal journals