

# DHRUVA SHAW

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## PROFESSIONAL SUMMARY

Innovative Robotics and Automation Engineer with proven expertise in AI/ML model development, cyber surveillance tools, and full-stack solutions. Skilled in designing scalable systems with focus on low-latency, high-quality infrastructure. Experienced in leading technical initiatives, mentoring teams, and translating complex challenges into efficient, customer-centric solutions.

## EDUCATION

### Master of Science, Financial Engineering

World Quant University | Expected Dec 2025 – 2027

### Bachelor of Technology, Robotics and Automation (Dean's List)

Lovely Professional University | Aug 2021 – May 2025

## WORK EXPERIENCE

### Technical Research Assistant

CENJOWS | New Delhi, India | Dec 2025 – Present

### Robotics Engineer

India STEM Foundation | Gurugram, Haryana, India | Jul 2025 – Aug 2025

- Supported WRO Season 2025 by providing technical insights and directing technical team to deliver robust robotics solutions and scalable event preparation
- Delivered technical training and mentorship on robotics and electronics, focusing on scalable system design for competitive challenges
- Orchestrated webinars and training sessions on electronics, robotics, and event management with emphasis on data-driven solutions
- Managed competition logistics including venue setup, mission model construction, and technical infrastructure oversight
- Served as Head Judge for RoboMission Junior at Mumbai Regionals and Ahmedabad Nationals, implementing clear evaluation mechanisms
- Coordinated WRO Kolkata Regionals, finalizing event dates and supervising comprehensive competition planning and execution

### Robotics Engineer – Intern

India STEM Foundation | Gurugram, India | Jun 2024 – Jun 2025

- Authored detailed reports on webinars, student training sessions, and WRO 2025 registration updates to optimize evaluation mechanisms
- Led ISF Certified STEM Teacher Training Program, equipping educators with robotics, automation, and machine learning methodologies
- Developed comprehensive 4-hour STEM teacher training program for 1,000 educators emphasizing scalable robotics and automation solutions
- Designed structured 30-period STEM training curriculum enabling teachers to implement scalable learning approaches in schools
- Mentored two interns in Team Coordinator and Robotics Engineer roles, ensuring robust project execution and quality standards

## KEY PROJECTS

### Adverse: Automated OSINT System for Digital Identity Verification

Patent Application No: 202531018252

- Developed automated open-source intelligence system for digital identity verification and cyber surveillance (<https://dhruvashaw.in/adverse>)

### **PhishNet: AI-Based Real-Time Fraud Defense**

- Developed high-speed, scalable system to proactively monitor and detect sophisticated phishing/typosquatting attacks

### **Mind Controlled Bionic Arm with Sense of Touch**

- Designed low-cost bionic hand with touch sensor in gripper to improve user safety and dexterity (2nd Best Poster at EE Research Day, IIT Ropar)

### **Osteoporosis ML Model**

- Developed AI model for early detection of osteoporosis and KL grade knee OA using Indian population-specific database

### **Minato Namikaze**

- Created versatile Discord bot handling admin tasks, entertainment features, and community management

## **TECHNICAL SKILLS**

**Programming Languages:** Python, C++, Java, JavaScript, C, Go, Rust, Scala, R, MATLAB, SQL, Bash, Shell Scripting

**AI/ML Frameworks:** TensorFlow, PyTorch, Keras, Scikit-learn, Computer Vision, NLP, Generative AI, MLOps, Deep Learning

**Web Development:** React, Angular, Node.js, Django, HTML, CSS, REST APIs, Microservices, Full-Stack Development

**Robotics & Automation:** ROS, Control Systems, Embedded Systems, Microcontrollers (Arduino, Raspberry Pi, STM32), IoT, PLC Programming, SLAM, Sensor Fusion, UAV/Drones

**Data & Analytics:** SQL, NoSQL (PostgreSQL, MongoDB), Pandas, Apache Spark, Hadoop, Data Visualization, Statistical Analysis

**Cybersecurity:** OSINT, Penetration Testing, Vulnerability Assessment, Ethical Hacking, Network Security, SIEM, IDS/IPS

**Tools & Platforms:** Git/GitHub, Linux/Unix, Docker, AWS, Azure, GCP, JIRA, Agile/Scrum

## **HONORS & AWARDS**

- **IEEE SPS Scholarship:** Selected from 250+ applicants worldwide for demonstrating commitment to signal processing education and career
- **2nd Best Poster at EE Research Day, IIT Ropar:** "Mind Controlled Bionic Arm with Sense of Touch"

## **CERTIFICATIONS**

- Ethical Hacking – MSME (PPDC), Nov 2025
- Software Engineer Certificate – HackerRank, Nov 2025
- How 5G & 6G Empower the Immersive XR Revolution – IEEE Communications Society, Nov 2024
- Artificial Intelligence for Sustainable B5G/6G Networks – IEEE Communications Society, Sep 2024
- Industrial Automation (PLC Programming) – Central Tool Room & Training Centre, GOI, Jun-Jul 2023
- Drone Hands-on-Training – Chitkara University & IIT Bombay, Sep 2022
- Oracle Database 11g: Advanced PL/SQL – Central Tool Room & Training Centre, GOI, Jun-Jul 2020
- Autonomous and Mobile Robotics – Robosapiens Technologies Pvt. Ltd, Dec 2019

## **PUBLICATIONS & PRESENTATIONS**

- "Mind Controlled Bionic Arm with Sense of Touch" – Presented at Indian Engineering Congress (Biotechnology category)
- "Robotic Swarm With Independent Selection of Master-Slave Configuration" – SysCon24 Student Event
- "Mind Control Bionic Arm with Sense of Touch" – 5th International Conference on Intelligent Circuits and Systems (ICICS-2023)