

Dhruva Shaw

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ABOUT ME

Innovative Robotics and Automation Engineer experienced in designing scalable AI/ML models and automation systems. Proven expertise in developing early detection models, cyber surveillance tools, and robust full-stack solutions with a focus on low-latency, high-quality infrastructure. Adept at translating real-world challenges into efficient, customer-centric systems while leading technical and educational initiatives.

EDUCATION AND TRAINING

Lovely Professional University

BACHELORS OF TECHNOLOGY, Robotics and Automation

Aug 2021 - May 2025

WORK EXPERIENCE

IIT TIRUPATI

RESEARCH INTERN

UNDER DR. Y KALIDAS

Sept 2025 – Present

REMOTE

INDIA STEM FOUNDATION

ROBOTICS ENGINEER

Jul 2025 - Aug 2025

GURUGRAM HARYANA, INDIA

WORLD ROBOT OLYMPIAD INDIA

ROBOTICS ENGINEER

Jul 2025 - Aug 2025

GURGAON, INDIA

- Supported the WRO season 2025 by providing technical insights and aligning team efforts to deliver robust robotics solutions.
- Directed the technical team to enhance scalable event preparation and ensure high-quality technical support.

INDIA STEM FOUNDATION

ROBOTICS ENGINEER - INTERN

Jun 2024 - Jun 2025

GURGAON, INDIA

- Authored detailed reports on webinars, student training sessions, and WRO 2025 registration updates to optimize data evaluation mechanisms.
- Led the ISF Certified STEM Teacher Training Program, equipping educators with robotics, automation, and foundational machine learning methodologies to solve real-world challenges.
- Developed a comprehensive 4-hour STEM teacher training program for 1,000 educators, emphasizing scalable and efficient robotics and automation solutions.
- Designed a structured 30-period STEM training curriculum to enable teachers to implement scalable STEM learning approaches in schools.
- Mentored two interns—one as a Team Coordinator and another as a Robotics Engineer Intern—ensuring robust project execution and adherence to quality standards.

WORLD ROBOT OLYMPIAD INDIA

ROBOTICS ENGINEER - INTERN

Jun 2024 - Jun 2025

GURGAON, INDIA

- Delivered technical training and mentorship on robotics and electronics, focusing on scalable system design to prepare participants for competitive challenges.
- Orchestrated webinars and training sessions on electronics, robotics, and event management, laying the groundwork for high-quality, data-driven solutions.
- Managed competition logistics including venue setup, mission model construction, and technical infrastructure oversight to support scalable event operations.
- Conducted quality assurance and testing processes to validate mat integrity and competition setup, ensuring low-latency and robust operational environments.
- Served as Head Judge for RoboMission Junior at Mumbai Regionals and Ahmedabad Nationals, implementing clear evaluation mechanisms to guarantee fair assessments.
- Coordinated WRO Kolkata Regionals by leading event execution and ensuring readiness of technical infrastructure.
- Finalized WRO 2025 regional event dates and supervised comprehensive competition planning and execution for scalable event management.

PROJECTS

Mind Controlled Bionic Arm with Sense of Touch

Aug 2023 - Present

- This paper/project proposes a new design for a low-cost bionic hand with a touch sensor in the gripper. This feature aims to improve user safety and dexterity.
- The hand is crucial for daily life, and this design offers a more accessible alternative to hand transplantation.

Osteoporosis ML Model

- An AI model is being developed to detect Osteoporosis early and KL grade knee OA, using an Indian population-specific database

Minato Namikaze

- Minato Namikaze, the versatile Discord bot, handles everything from admin tasks to fun and games.

SKILLS

- **Programming & Scripting:** Python (including Discord.py), PHP, Java, C, C++, Matlab, Simulink
- **Web Development:** Full-Stack Web Development, SQL, PL/SQL, Cybersecurity(VAPT), Software Development and Management Process, Github, Git, Linux
- **Machine Learning:** Machine Learning, Image Classification, Computer Vision, Natural Language Processing
- **Automation & Embedded Systems:** Automation Systems, Industrial Automation, Microcontroller Ecosystems (Arduino, ESP32, Raspberry Pi, STM32, Atmega8), IoT, PLC Programming, Data Analytics, RPA (Robotic Process Automation), Signal Processing, Control Systems, Robotics, Systems Engineering, UAV (Drones), Bio-Robotics, Autonomous Systems, Mobile Robotics

CERTIFICATIONS

- **Artificial Intelligence for Sustainable B5G/6G Networks:**09/09/2024 – 14/09/2024
IEEE Communications Society
- **Industrial Automation (PLC Programming):**12/06/2023 - 11/07/2023
Central Tool Room & Training Centre, GOI
- **Drone Hands-on-Training:**12/09/2022 - 16/09/2022
Chitkara University, Chandigarh in coordination with Indian Institute of Technology Bombay
- **Oracle Database 11g: Advanced PL/SQL:**25/06/2020 - 10/07/2020
Central Tool Room & Training Centre, GOI
- **Autonomous and Mobile Robotics:**21/12/2019 - 22/12/2019
Robosapiens Technologies Pvt. Ltd

PUBLICATIONS

- **Mind Controlled Bionic Arm with Sense of Touch** [8 class version].
- **Book of Abstracts 39th IEC** [*Mind Control Bionic Arm with Sense of Touch*].
- **Indian Engineering Congress. Paper presentation** titled "*Mind Controlled Bionic Arm with Sense of Touch*" in biotechnology category
- **SysCon24 Student Event Paper** titled "**Robotic Swarm With Independent Selection of Master-Slave Configuration**"
- **5th International Conference on Intelligent Circuits and Systems (ICICS-2023)** Poster Presentation under the topic "*Mind Control Bionic Arm with Sense of Touch*"
This was the initial stage of the project and the first time that the project at a conference.

HONOURS AND AWARDS

- **IEEE SPS Scholarship:**The SPS Scholarship Program recognizes students who have expressed interest and commitment to pursuing signal processing education and real-world career experiences. This year, 45 outstanding students were selected from a large field of more than 250 qualified applicants worldwide.]
- **2nd best poster at EE Research Day at IIT Ropar:**The poster was titled "Mind Controlled Bionic Arm with Sense of Touch"

PATENTS

Adverse: Automated Open-Source Intelligence System for Digital Identity Verification and Cyber Surveillance

Patent Application No: **202531018252**

Adverse is an advanced open-source intelligence (OSINT) and facial recognition system designed to aggregate, analyze, and verify publicly available digital information. The system integrates AI driven search algorithms, facial comparison technology, and passive reconnaissance methods to extract relevant data from social media platforms, search engines, and publicly accessible CCTV networks.

Link <https://dhruvashaw.in/adverse>