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# RIKIN PAREKH

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### **PROFILE**

Proficient in Python, C, and embedded systems with expertise in Arduino and Raspberry Pi. Passionate about robotics, IoT, and AI, with hands-on experience in developing automation solutions, embedded systems, and smart devices.

#### **EDUCATION**

# Bachelor of Technology in Information and Communication Technology,

Pandit Deendayal Energy University

Expected 2027

- **CGPA:** 9.06/10.0
- Coursework: Digital Logic Design, Signal Processing, Data Structures and Algorithm, Discrete Mathematical Structure, Java, C Programming, Python

HSC - 12th Grade, Best Higher Secondary School

2023

### **SKILLS**

Programming Languages

Microcontrollers and Platforms

Frameworks and Tools

Python, C, MATLAB, Embedded C, SQL

Arduino, ESP32, Raspberry Pi

Django, Git, Linux

# **PROJECTS**

Underwater ROV 2024

Designed and developed a **remotely operated underwater vehicle** for structural analysis of submerged infrastructure. Integrated BLDC motors with Raspberry Pi for precise maneuverability and real-time control. Led a team of four through ideation, prototyping, and testing, **securing ₹50,000 in funding** for further development.

### **Robotic Process Automation**

2024

Developed an **RPA** solution at the **Datamatics Hackathon** to automate repetitive business processes, enhancing efficiency and accuracy. Designed and implemented a bot using Python and Datamatics automation frameworks to streamline data extraction, processing, and reporting. Optimized workflow automation, reducing manual effort and improving operational speed. Successfully reached the finals at **HT Bombay**, showcasing the solution's impact and scalability in real-world applications.

Smart Mirror 2023

Developed a smart mirror that displays **daily routines**, Google Calendar events, and New York Times news, while also allowing Spotify control and **integration with smart assistants** like Google Assistant or Alexa. Powered by a **Raspberry Pi**, it uses a **two-way film** on the surface, enabling it to function as both a display and a regular mirror, creating an interactive and functional addition to any smart home.

#### Indian AI Product Finder

2021

Created an Indian AI product finder during Intel AI bootcamp, where I learned about **natural language processing**. Using a dataset of Indian products from Amazon sourced from Kaggle, the **AI analyzes** customer descriptions to find equivalent local versions, making it easier for users to discover Indian alternatives to their desired products.

#### ACHIEVEMENTS

### • Top 5 Finalist – Nirman 1.0, PDEU SOM & IIC

Apr, 2025

Secured 5th position in a university-level innovation and entrepreneurship competition. Received a cash prize of ₹8000. Project details are confidential due to ongoing development potential.

• Two Time Finalist - Datamatics Hackathon, IIT Bombay

Dec, 2024 Dec, 2023

Developed an RPA solution to automate business processes, enhancing efficiency and accuracy.

# • Winner - Round 1, Robofest (Underwater ROV Category)

Aug, 2024

Led a team in designing and prototyping a remotely operated underwater vehicle for structural analysis of submerged infrastructure. Secured ₹50,000 in funding.

• Top 15 (Regional) - NASA Space Apps Challenge

Oct, 2023

Competed in high-level hackathons, showcasing innovative problem-solving and technical expertise.

• Exhibitor - National Children's Science Congress (NCSC) & Tarang Fest Presented smart mirror and IoT-based projects representing Atal Tinkering Lab.

Jan, 2023

### CO-CURRICULAR EXPERIENCE

### • Cretus Robotics Club - Active Member

Engaged in hands-on robotics workshops, hackathons, and technical competitions, expanding expertise in embedded systems, automation, and AI.

### • Intel AI Bootcamp - Participant

Developed an AI-based Indian product finder for Amazon, leveraging machine learning techniques to enhance search optimization.

# • Atal Tinkering Lab - Mentor & Workshop Conductor

Supervised and organized STEM workshops for students, promoting innovation in robotics and IoT.

# • Civic & Social Services Internship (CSSI) - Volunteer

Assisted visually impaired individuals at Navjyot Andhjan Mandal, contributing to accessibility and inclusive technology initiatives.

### **CERTIFICATIONS & LEARNING**

• IBM SkillsBuild: Building AI Solutions Using Advanced Algorithms and Open Source Frameworks

Learned to build AI models using advanced machine learning algorithms and open-source frameworks like and scikit-learn.

• Harvard CS50: Introduction To AI

2024

Covers fundamental AI concepts, machine learning, and neural networks

• Harvard CS50: Web Development with Django

2022

Learned backend development using Django, SQL, and REST APIs.

• Intel AI Bootcamp

2021

Focused on NLP, trained an AI-based Indian product finder using Amazon product datasets.