

# AYUSH RAJ

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## EXPERIENCE

### Software Developer Intern ↗

#### Horizon Mars Rover Team, CUSAT

📅 Nov 2023–Present 📍 Kochi, Kerala

- Developed and implemented a Unified Robot Description Format (URDF) -based robotic arm model with **Arduino Due (32 bit ARM Micro-controller)** and servo motor control in Robot Operating System (ROS).
- Technologies used : **C++, ROS 2 (Humble), Linux, Arduino IDE**

### AI - ML Intern ↗

#### IBM Skillsbuild

📅 June 2024 – July 2024 📍 Remote

- Developed expertise in neural networks, NLP, and GenAI, built a **kidney stone detector** and a **fine tuned chatbot** which was integrated into a restaurant web portal with 20% faster menu search.
- Technologies used : **IBM Watson Studio, CSV, EJS, CSS, Bootstrap, Node.js, Express.js, MongoDB Atlas**

## PROJECTS

### Preventive AI ↗

📅 Sept 2024 - Oct 2024 🌐

- An AI platform combining **medical imaging, genomic data, and EHRs** for early cancer detection and personalized treatment insights.
- Tech Stack: **Python, Supervised ML, EJS, CSS, Node.js, Express.js, MongoDB Atlas, TensorFlow Serving**

### DIKSHA ↗

📅 Nov 2024 🌐

- Built a full stack application offering free educational tools, including **problem-solving resources, an NEP syllabus generator, AI chatbot, Doc QnA, Quiz**, and more.
- Tech Stack: **Bootstrap, Gemini API, Render, Node.js, Express.js, MongoDB Atlas, Vertex AI, LLMware**

### Hack-Match ↗

📅 Jan 2024 🌐

- Developed a platform to help users find ideal hackathon teammates by matching them based on skill sets & interests.
- Tech Stack: **EJS, CSS, Cloudinary, Bootstrap, Render, Node.js, Express.js, NoSQL DB**

### User Authentication System ↗

📅 May 2024 🌐

- Built a full-stack, responsive user authentication website with secure registration, login, and profile management
- Tech Stack: **EJS, CSS, Bootstrap, Render, Node.js, Express.js, NoSQL DB**

## SOFT SKILLS

Leadership, Decision Making, Teamwork, Creativity

## EDUCATION

### Bachelor of Technology, Computer Science

#### Cochin University Of Science And Technology (CUSAT)

📍 Kochi, Kerala

📅 Oct 2022 – May 2026 (Expected)

Currently in **3rd Year** - CGPA : 9.6

## Academic Achievements

- Represented **INDIA** at **European Rover Challenge, 2024, Poland - Robotics Competition**. Team name : Horizon (World Rank **18th**)
- Listed among **Top 10% Students** in the Batch.

## POSITIONS OF RESPONSIBILITY

- Team Lead** @HORIZON- Mars Rover Team, CUSAT
- SIG AI Lead** @IEEE Execom'24- CS Branch Society, CUSAT

## SKILLS

### Languages

Java Python Javascript C/C++ Embedded C

### Frameworks and Libraries

React OpenGL ROS NodeJS ExpressJS  
Tailwind RestAPI AXIOS Gemini API Pandas  
AWS STM32CUBE - IDE LLMware

### Databases

MongoDB SQL

### Tools

Git/GitHub Linux Vertex AI OOP AI-ML Proteus

## ACHIEVEMENTS

- Won 5 Hackathons (out of 7) conducted by **Google Development Group ↗ (GDG), Major League Hacking ↗ (MLH) & Inovact ↗**.
- Solved **100+** programming problems across various platforms like **LeetCode, Hackerrank** etc.
- Jury Choice Award Winner** at AIC by Accenture & **Finalist** at DevsHouse'24 Hackathon by VIT Chennai

## CERTIFICATIONS

### ERC Space & Robotics Competition, AGH University Poland ↗

📅 Sep 2024

### Certificate of Appreciation (Tech. Team) - TEDxCUSAT↗

📅 Sep 2024

### Artificial Intelligence Fundamentals, IBM ↗

📅 June 2024

### Cyber Security and Ethical Hacking, IIT Delhi ↗

📅 Nov 2023

### Shastra X Codechef Programming Tournament - IIT Madras ↗

📅 Oct 2023