

Ashutosh Pattanayak

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OBJECTIVE

"Passionate computer science engineer with a knack for building innovative solutions, designing efficient systems, and solving complex problems. Driven by curiosity and a commitment to shaping the future, one line of code at a time."

Education

Manipal University Jaipur, Btech in Computer Science(IOT IS)	Sept 2022 – July 2026
FIITJEE,Intermediate- PCM ,Scored 100 percentage marks in MATHS 1A 11th boards	2020-2022 May
Genesis International School - Class X CBSE	

Experience

RESEARCH INTERN(IISER BERHAMPUR)- Worked on AI agents using Docker for containerisation , and consul for service discoverability	May - July
Marketing Technical Hospitality Advisor, Cactus Student Club,	
Manipal- Managed technical and marketing operations during events, improving outreach and coordination.	

RESEARCH

CO-Authored a research paper on Advancing 5G Non -Terrestrial Networks:
Optimizing GEO , LEO , Hybrid Models , and Beamsteering Technologies

Authored a research paper on Smart Banking contracts detailing system architecture, role-based access control, gas efficiency, and future improvements including KYC, Layer-2 scaling, and oracle integration.

Achievements

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- Multiple time math , science and english olympiads gold medalist
 - 11th boards Maths state Topper

Projects

Worked on problem statement - improving electric scooter sales and distribution platform in MUJ Hackathon

- Deeply analysed the problems in an application called bikesetu and presented relevant solutions and , methodologies for improvement

Super Tic Tac Toe Game

- Built a tic tac toe game
- Tools Used: Java

Blockchain-Based Smart Banking Contracts

- Developed a decentralized banking platform using Ethereum smart contracts for role-based account management.
- Integrated MetaMask and Web3.js for secure wallet authentication; tested using Ganache and Truffle Suite.

Intelligent AI Agents Based Traffic & Environment Monitoring System

- Built a modular microservice system with Dockerized AI agents generating synthetic traffic and environmental data.
- Implemented 5 agents (traffic, CO2, noise, humidity, temperature) and a Flask-based controller for coordination and a central app for agents dashboard
- Enabled real-time service discovery and health monitoring using Consul.
- Developed endpoints for intelligence summaries and CSV/JSON data export.
- Also developed a search service to look for requirements of agents

Technologies

Programming Languages: C , Java , JavaScript , SQL , Python , Powershell
command prompt

Web and Frameworks: Flask, HTML-CSS(basics)

Devops Deployment: Docker , Docker Compose , Consul(service discovery)

Databases: MySQL