



RITURAJ SINGH

PROFESSIONAL SUMMARY

Proactive B.Tech CSE student (CGPA: 8.42) passionate about DevOps, cloud automation, and building scalable systems. Proficient in Python, Git, Docker, and AWS, with hands-on experience in cloud monitoring and CI/CD. Eager to apply automation skills to build and maintain robust pipelines and support modern MLOps workflows at scale.

PROFESSIONAL EXPERIENCE

AI Intern

Intern | TATA STEEL UISL | Jamshedpur, India

May 2025 - June 2025

- Developed a Python script using OpenCV to **automate** the analysis of video feeds for detecting speeding vehicles.
- Demonstrated problem-solving and reliability in an independent project setting under the HR Learning & Development team.

PROJECTS

Cloud Infrastructure Monitoring with AWS CloudWatch

AWS CloudWatch, EC2, IAM, SNS

- Configured and deployed CloudWatch agents on EC2 instances to stream logs and monitor key performance metrics like CPU Utilization, Memory, and Disk I/O.
- Developed a centralized monitoring dashboard to visualize real-time system health and historical performance trends for proactive analysis.
- Implemented custom alarms that trigger SNS notifications for critical events, enabling rapid response to potential system failures and improving reliability.

AI College Companion (Personal Project)

React.js, Node.js, Docker, GitHub Actions, MongoDB

- Containerized the full-stack application using Docker to create a portable and consistent environment for development, testing, and deployment.
- Established a CI/CD pipeline with GitHub Actions to automatically build and run tests on every commit, ensuring code integrity and automating the workflow.
- Built a GenAI-powered academic planner that parses PDFs to create study schedules, featuring task tracking and cloud data storage.

Automated RL-GNN Pipeline for Wireless Network

Optimization (Recent Project)

Python, PyTorch, PyG, Stable Baselines3, Gym, NumPy

- Engineered a complete ML training pipeline to automate the simulation, training, and evaluation of a Reinforcement Learning agent for network resource allocation.
- Developed a custom callback system for real-time monitoring of key performance metrics (e.g., Spectral Efficiency, Energy Efficiency) during the training loop.
- Packaged the simulation environment using Gym and configured the PPO algorithm from Stable Baselines3, creating a repeatable system for experimentation.

CERTIFICATIONS & VIRTUAL EXPERIENCES

- AWS APAC Solutions Architect** -Virtual Internship| Forage Simulation
- Gen AI using IBM Watsonx** | AdroitProlearn (IBM Developer Skills Network)
- Deloitte Australia Data Analytics & Forensic Technology** | Forage Simulation
- Tata Data Visualisation -Virtual Internship**| Forage Simulation

CONTACT

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- [Github](#)

EDUCATION

VIT Bhopal University |

Bhopal, India

Bachelor of Technology (B.Tech),
Computer Science & Engineering
(AI & ML)

- Expected Graduation: May 2027
- Current CGPA: 8.42/10.0

DAV Public School | Bistupur, India

- CBSE, Higher Secondary (12th Standard) | January 2023| 86.4%
- CBSE, Secondary (10th Standard) | January 2021 | 95%

SKILLS

- DevOps & Cloud:** AWS (CloudWatch, EC2, IAM), Docker, Git, GitHub, CI/CD (GitHub Actions)
- Languages & Frameworks:** Python, Java, C++, React.js, Node.js
- AI/ML Frameworks:** TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy
- Databases & Platforms:** MongoDB, MySQL, IBM Watsonx, Gemini API, OpenCV