# Ayush Ranjan

## Ayush Ranjan - Portfolio

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Medium - Ayush Ranjan – Medium

## EDUCATION

**Bachelor of Technology in Computer Science and Engineering**
Graphic Era Deemed to be University • Dehradun, Uttarakhand • 2025

## PROJECTS

**AWS Multi-Tier Architecture**

View Project : **Ayush Ranjan | Multi-Tier Architecture on AWS**

- Designed and deployed a three-tier architecture using AWS services (AWS EC2, AWS RDS, AWS S3).
- Configured custom AWS VPC with public/private subnets, routing tables, and security groups.
- Managed AWS EC2 instances with AWS IAM roles for secure, scalable application deployment.
- Implemented AWS Elastic Load Balancing and AWS Auto Scaling for high availability and fault tolerance.
- Configured AWS RDS with automated backups, monitoring, and enhanced security.
  **Achievements: Reduced downtime and improved performance by implementing AWS Auto Scaling, Elastic Load Balancing, and optimizing EC2 and VPC configurations.**

**MoneyTrack (Cross-Platform Expense Tracker App)**

View Project : **Ayush Ranjan | MoneyTrack**

- Developed a cross-platform mobile app using React Native & Expo to track daily expenses with responsive UI.
- Implemented local storage with AsyncStorage for offline data persistence and seamless user experience.
- Added date-based filtering and category tagging to enhance expense management and organization.
- Designed UI with React Context API for state management and reusable components for scalability.
- Integrated features like expense editing, deletion, and navigation for enhanced usability.
  **Achievements: Successfully built and optimized a user-friendly expense tracker mobile app.**

View More Projects

## ACHIEVEMENTS

**Research Papers**

1. **Vechile Collision Avoidance System During Lane Change Using Internet of Things**
   View Paper : **IEEE Paper**

   - Proposed a system that integrates GPS, GSM, IoT, Raspberry Pi camera, and Arduino for real-time data sharing and analysis.
   - Detects collision risks, alerting drivers through frame-by-frame video analysis.
   - Showcases the potential of emerging technologies in enhancing vehicular safety.

2. **Artificial Intelligence Enabled Emergency Green Corridor Mechanism for Ambulance Service in Smart City**
   View Paper: **IEEE Paper**

   - Devised a smart solution for handling urban congestion, especially critical for emergency healthcare and organ transport.
   - Introduced a modern approach using GPS and RFID tags to swiftly transport organs, enhancing life-saving surgeries.
   - Streamlined patient care and organ delivery, saving lives by reducing delays and ensuring timely medical assistance.

**Hackathon**

3. **BNP Paribas Hackathon | January 2025**
   View Project: **Financial News Sentiment Analysis**

   - Developed a solution for Financial News Sentiment Analysis.
   - Leveraged advanced machine learning and web development technologies to create an investor portfolio recommendation system.
   - Collaborated in a competitive environment to deliver a fully functional prototype within the hackathon timeframe.
   - Secured an internship opportunity through exemplary performance at the BNP Paribas Hackathon.

## SKILLS

**Languages:** C , C++ , Java , Javascript
**Cloud Computing Platform:** AWS
**DevOps Tools**: Jenkins , Ansible , Terraform , Git , Docker
**Tools and Frameworks**: ReactNative , Git , VS Code , Figma