

Nirjay Kumar

Bachelor of Technology
Artificial Intelligence and Data Science

+91-9304812785
nirjay2022@gmail.com
linkedin.com/in/nrv28

EDUCATION

- **Indian Institute of Technology(IIT) Patna** Sept 2022 - May 2026 (Expected)
(B.Tech in Artificial Intelligence and Data Science. **CPI: 8.37**) Patna, India
- **S.S.N. High School, East Champaran** April 2020 - March 2022
(Senior Secondary School Certificate Examination conducted by BSEB. **Percentage: 87.8%**) Motihari, India
- **Sanskriti Public School, Balha More, Areraj** March 2019 - March 2020
(Secondary School Certificate Examination conducted by CBSE. **Percentage: 92.4%**) Motihari, India

EXPERIENCE

- **Elderly People Fall Detection using Android Sensor and Socket** IIT Patna
Innovation Project under Prof. Rahul Mishra(IIT Patna)
 - Developed an Android app for real-time fall detection, leveraging the phone's accelerometer to monitor sudden changes in movement, achieving a detection accuracy of **93%**.
 - Implemented socket communication to send instant alerts to a connected device within **0.5 seconds**, ensuring rapid notification of potential emergencies.
 - Designed the app to emit a beep alert and share the precise GPS location with an average accuracy of **5 meters**, significantly enhancing emergency response capabilities.
 - Conducted extensive testing across **50 simulated falls** and **10 real-life scenarios**, demonstrating robust performance in diverse conditions.

Tools & Technologies: Android Studio, Sockets, Accelerometer Sensor, Gyroscope, GPS.

Source Code: Available on GitHub at github.com/nrv28/Fall-Detection.

- **BASIC** Dec 2023 - Jan 2024
Software Developer Intern
 - * Developed **RESTful APIs** for product listing, user management, and order processing, ensuring seamless integration with the front-end interface.
 - * Designed and optimized **MongoDB schemas** to handle scalable storage of product, user, and order data, reducing query latency by 20%.
 - * Leveraged **Docker for containerization**, enabling consistent development and deployment workflows across environments.
 - * Conducted API testing using Postman and implemented secure authentication using JWT.

Tools & Technologies: NodeJS, ExpressJS, MongoDB, Docker, Postman

Source Code: Available on GitHub at github.com/nrv28/Nirjay-Events.

PROJECTS

- **Traffic Security and Control using OCR, MERN, Kubernetes, Docker and Jenkins** (Source Code)
June 2024
 - Built an innovative computer vision tool that integrates with traffic systems, boosting automated monitoring and **reducing manual oversight by 30%**.
 - Designed and developed OCR (Optical Character Recognition) to accurately identify and extract number plate information with an **accuracy rate of 95%**.
 - Created a web portal for registration of new vehicles and online challan payment, improving user convenience and reducing manual processing time by 40%.
 - Implemented **containerization using Docker**, deploying **4 application instances** to ensure scalability, high availability, and redundancy.
 - Configured **NGINX as a reverse proxy** and load balancer, leveraging the **round-robin algorithm** to evenly distribute incoming traffic across the 4 server instances, reducing server response time by 20%.
- **Tools & Technologies:** Node.js, Express, MongoDB, React.js, Python, OCR, Payment Gateway, Context API, Docker, Docker Compose, NGINX.

- **Advanced Event Organizer Booking Web Application** (Source Code)
May 2024
 - Engineered a comprehensive web application utilizing the MERN stack for seamless event booking services, catering to weddings, birthdays, and other special occasions.
 - Used advanced features to enable clients to effortlessly find and book the nearest event organizers, enhancing user convenience.
 - Integrated secure payment gateway** for smooth transactions, real-time order tracking for timely updates, and Context API for efficient state management across the application.
- **Tools & Technologies:** MongoDB, Express, ReactJs, NodeJs, Context API.

KEY COURSES TAKEN

- Data Structure, Algorithms, Artificial Intelligence, Computer Architecture, Computer Networks, Operating System

TECHNICAL SKILLS

- **Programming:** C/C++ , Python , Javascript, Kotlin
- **Tech Skills:** OOPs , MySQL , MongoDB , Github, Android Studio, Kubernetes, Docker, Jenkins
- **Frameworks:** Node.js , Express.js , React.js

POSITION OF RESPONSIBILITY

- **TEDxIITPatna** Successfully secured sponsorships for TEDxIIT Patna by engaging with companies and effectively presenting the value proposition of sponsoring the event 2023

ACHIEVEMENTS

- Google CodeJam** Secured 4710 Global rank in Google’s Competitive Programming Contest. 2023
- Specialist on Codeforces** Specialist on Codeforces with Maximum rating of 1455 2024
- CodeChef** 4 Star on Codechef with Rating of 1815 2024
- JEE Advance** Secured JEE Advance Rank of 5975 appeared for JEE 2022 2022
- JEE Mains** Top 1.95 Percentile out of 1 Million Candidates who appeared for JEE MAINS 2022 2022

CERTIFICATIONS

- Extraordinary Intern Certification from FactApp
- Google CodeJam certification for Programming Contest