

ROUNAK RAJ

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EDUCATION

National Institute of Technology (NIT), Srinagar

Bachelor of Technology (B.Tech) **CGPA: 8.73/10.00** (Top 10 of 85 students)

December 2021 – July 2025

Srinagar, Jammu and Kashmir

PROFESSIONAL EXPERIENCE

Rashmi Group

January 2025 – May 2025

Software Development Engineer Intern

Kolkata, West Bengal

- Architected a production-grade image import microservice integrating Google Drive API, Cloudinary cloud storage, and PostgreSQL database, processing 10,000+ images with 99.5% uptime.
- Implemented Redis-based asynchronous job queue for background image processing, reducing API response time by 60% and improving system scalability.
- Deployed containerized backend services on Railway platform with automated CI/CD pipelines, ensuring zero-downtime deployments and efficient resource utilization.
- Collaborated with cross-functional payroll engineering team to develop internal HR management portal, implementing RESTful CRUD operations with MongoDB integration for 500+ employee records.

IISc (Indian Institute of Science)

December 2023 – February 2024

Research Intern – Machine Learning

Bengaluru, Karnataka

- Designed and trained a multi-modal neural network for sentiment classification supporting both text and voice inputs, achieving 87% accuracy on test datasets.
- Developed Python-based data preprocessing pipeline handling audio feature extraction (MFCC, spectrograms) and text tokenization for model training.

PROJECTS

Recipe Haven – Full-Stack Recipe Management Application (GitHub) (Live Dashboard)

April 2024 – July 2024

- Built and deployed production-ready full-stack web application using React.js frontend, Node.js/Express backend, with complete CRUD functionality for personalized recipe management.
- Implemented JWT-based authentication system with bcrypt password hashing, securing user sessions and protecting 1,000+ recipe entries.
- Integrated third-party Spoonacular Food API for external recipe discovery and PostgreSQL for persistent data storage with optimized query performance.
- Containerized entire application stack using Docker and Docker Compose, enabling consistent deployments across development and production environments.
- **Tech Stack:** React.js (Hooks), Node.js, Express.js, PostgreSQL, Redis, JWT, Docker, Railway, REST APIs

Payment Card Validation Service – Go Microservice (GitHub) (Live Dashboard)

July 2024 – August 2024

- Developed and deployed lightweight microservice in Go using net/http package, exposing RESTful endpoints for real-time payment card validation using Luhn algorithm.
- Designed responsive single-page application frontend with vanilla JavaScript, HTML5, and CSS3, providing instant validation feedback without page reloads.
- **Tech Stack:** Go (Golang), net/http, REST APIs, Luhn Algorithm, Docker, Railway, HTML5, CSS3, JavaScript

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript (ES6+), C++, Go (Golang), SQL, MySQL

Frontend Technologies: React.js (Hooks), HTML5, CSS3, JavaScript, Responsive Design

Backend & APIs: Node.js, Express.js, RESTful APIs, Microservices, JWT Authentication, API Integration

Databases: PostgreSQL, MongoDB, Redis (Caching & Queue Management), SQL Query Optimization

Cloud & DevOps: AWS (S3, IAM, EC2), Docker, Docker Compose, CI/CD, Railway Platform, Cloudinary

Development Practices: Agile, Scrum, Unit Testing, Code Review, Debugging, Problem Solving, Git Workflow, SDLC

Tools & Technologies: Git, GitHub, Postman, VS Code, Apache Kafka, Redis Queue, TensorFlow, Flask, NLP

CERTIFICATIONS & ACHIEVEMENTS

- Competitive Programming: Achieved 1500+ rating on Codeforces (Top 15% globally) and solved 500+ problems on LeetCode demonstrating strong algorithmic problem-solving skills.
- JP Morgan Software Engineering Virtual Experience: Completed hands-on simulation covering project repository setup, Kafka & H2 database integration, and RESTful API development on Forage platform.
- Inter-NIT Badminton Championship: Represented NIT Srinagar in multiple inter-NIT tournaments, demonstrating teamwork and leadership under pressure.