

Rudhra Deep Biswas

Personal-Portfolio 
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EDUCATION


VELLORE INSTITUTE OF TECHNOLOGY, VIT VELLORE

B.TECH IN COMPUTER SCIENCE
2020-2024 | Vellore, India
College of Engineering

ARMY PUBLIC SCHOOL

HIGHER SECONDARY
Marks: 93.1
Grad. May 2020 | Kolkata, India

LINKS

LinkedIn : // [rudhradeepbiswas](#)
Github : // [rudeUltra](#)
Leetcode : // [rudeultra](#)
Portfolio : // [Link](#)

COURSEWORK

UNDERGRADUATE

Data Structures and Algorithms
Operating Systems
Database Management Systems (DBMS)
Object Oriented Programming OOPS
Networks and Communication
Design and Analysis of algorithms
Artificial Intelligence
C++ Programming
Python Programming

SKILLS

PROGRAMMING

Languages

- Advance - C++, JavaScript
- Intermediate - Java, Python, C
- Novice - PHP, MATLAB

Frameworks and Library

- React.JS • Node.JS • OpenCV
- Bootstrap • Tailwind CSS

Web

- HTML5 • CSS • PHP • Mongoose
- Express • AWS • AWS API Gateway

Database

- MySQL • PostgreSQL • MongoDB

Tools

- Git/Github • Linux • Figma

CERTIFICATES

- EXECUTE HACKATHON DTU 2022
- DEVPOST COGNITION HACKATHON 2022

PROJECTS

THE INDIAN INVESTORS NEXT.JS, SUPABASE, AWS, PYTHON

Website 

- Engineered Serverless data pipeline using **Schedulers** and **AWS Lambda Python scripts** to automate real-time extraction of financial market data.
- Architected a scalable **PostgreSQL schema** and implemented centralized **SSO with PKCE** authentication flows via Supabase for session management. **Serverless API architecture** using **Edge Functions**


URBAN FLOW METRO BOOKING APPLICATION NESTJS, REACT, REDIS, POSTGRESQL, STRIPE

Website  | Github 

- Engineered a high-performance routing engine using the **Bellman-Ford algorithm** to calculate optimal paths across metro network graphs, leveraging **Redis** as an in-memory store to cache and accelerate graph data retrieval.
- Integrated **Polar/Stripe webhooks** with an **Event-Driven Architecture** to decouple core booking logic, payment success events asynchronously trigger the **Email System** for instant ticket delivery.
- Architected secure session management using **Google SSO (OAuth 2.0)** and **JWTs**, ensuring data integrity through **atomic database transactions** during the mission-critical ticket purchase and provisioning workflow.

EXPERIENCE

TOOLJET | OPEN-SOURCE LOW-CODE/NO-CODE PLATFORM

SOFTWARE ENGINEER 

Sept 2024 – Present

- Spearheaded a backend architectural overhaul by implementing **SOLID principles**, refactoring core **schema structures**, and enhancing system modularity through **atomic database transactions** and **Event-Based Architecture**.
- Engineered **mission-critical business logic** for Stripe payments, **Licensing Management**, and **AI Credit Systems** via **fault-tolerant schedulers** and enterprise-grade **SCIM/SSO protocols**.
- Architected ToolJet Plugin ecosystem improvements by streamlining **OAuth** and secure **token management** flows, enhancing plugin extensibility for third-party integrations.

SOFTWARE ENGINEERING INTERN

April 2024 – Sept 2024

- Led frontend initiatives by implementing advanced **UI design patterns** and robust **state management**, optimizing complex **data-binding workflows** for a high-performance builder.
- Developed core **Licensing features** and **Auth/Authz protocols**, while managing internal query services and secure environment configuration systems.

MERCOR.IO HARVARD INNOVATION LABS | FULL-STACK DEVELOPER

INTERN

Jan 2023 – Mar 2023

- Developed backend infrastructure on **AWS**, leveraging **API Gateway** and **Lambda** to architect scalable REST APIs using **Node.js** and **DynamoDB**.
- Integrated AI-driven Python scripts for automated email and voice call workflows, paired with a **React Native** mobile frontend design.