Rahul Hiragond

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Summary

I am a Software Engineer with deep expertise in scalable backend development, system design, and third-party API integrations. Proficient in building robust systems leveraging Python, Django, Celery, RabbitMQ, and PostgreSQL while focusing on performance optimization. I have a proven track record of designing scalable and high-performance systems and passionate about solving complex problems and delivering impactful solutions through clean, efficient code.

Technical Skills

Programming and Frameworks: Python, C, C++, Django, Flask, Node.js, Express.js, React.js, Celery, RabbitMQ, Redis, PostgreSQL
System Design and Integrations: Scalable System Architecture, Notification Services, Activity Log Services, Third-Party Integrations (Postmark, Twilio, Stripe, SendGrid, Webhooks, WebSockets)
Tools and Concepts: AWS (S3, SQS), Docker, Git, Caching Strategies, Query Optimization, Partitioning, Asynchronous Workflows, Data Structures and Algorithms (DSA)

Education

MIT Academy of Engineering (MITAOE), Pune, Maharashtra　　　　　　　　　　　　2021 - 2025
Bachelor of Technology in Computer Science and Engineering　　　　　　　　　　　　***CGPA: 8.90***
- **Technical Courses:** Data Structures and Algorithms, Operating Systems, Database Management Systems, Object Oriented Programming, Computer Networks, Analysis and Design of Algorithms

S.R.V.M High School and Jr. College, Jath, Sangli, Maharashtra　　　　　　　　　2019-2021
Senior Secondary (Class XII)　　　　　　　　　　　　　　　　　　　　　　　***Percentage: 91.50***

Work Experience

Software Engineer Intern - Bynry Inc　　　　　　　　　　　　　　　　　　May 2024 – Present
Technologies: Python, Django,RabbitMQ, Celery, SQS, PostgreSQL, MongoDB, Redis, Webhooks,WebSockets
- Reduced API response times to under **400** milliseconds by implementing **caching strategies**, optimizing **SQL queries**, and leveraging PostgreSQL features like **indexing**, **partitioning**, and **caching**. Reduced service calls by employing efficient data structures.
- Designed and implemented a scalable **notification service** capable of handling thousands of notifications per minute, supporting **email**, **SMS**, **WhatsApp**, and **in-app notifications**. Integrated third-party providers like **Postmark**, **Twilio**, and implemented **webhooks** and **WebSockets** for in App notifications.
- Improved robustness by adding **priority queues** to ensure high-priority notifications are delivered promptly.
- Streamlined the integration of third-party **APIs** to efficiently process millions of meter readings, utilizing **Celery** for background task execution. Implemented comprehensive logging and error-handling mechanisms to ensure accurate data retrieval and to automatically identify and correct discrepancies.
- Established a comprehensive activity log service to enhance log tracking; separated audit and business logs, resulting in clearer data analysis, and improved operational scalability for an environment handling over **100k** transactions monthly

Software Engineer (Freelance) - Massive Dynamics　　　　　　　　　　Jan 2024 – March 2024
Technologies: Python, Django Rest Framework, MongoDB, PostgreSQL, Payment Gateway Integration
- Designed a robust **backend architecture** to support an online platform for showcasing, selling, and donating artworks, ensuring scalability and smooth functionality.
- Integrated a secure **payment system** to facilitate seamless transactions, optimizing **APIs** for enhanced user experience and platform performance.

Technical Projects

Natours - Tour Booking Platform - GitHub | Live Link | *Node.js, Express.js, MongoDB, JWT, Stripe, SendGrid*
- Conceptualized and developed a full-stack application for browsing, customizing, and booking tours, leveraging Node.js, Express.js, MongoDB, and Mongoose. Integrated **Stripe** for secure and scalable payment processing.
- Implemented a comprehensive authentication and authorization system using **JWT**, ensuring robust user data security and controlled access to application resources.
- Configured an email notification system with **SendGrid** to automatically notify users about bookings and updates, enhancing user engagement.

Rule Engine Platform - GitHub | *AST, Python, Django, PostgreSQL, React.js, Bootstrap*
- Developed a full-stack platform to dynamically create, evaluate, and manage business rules using Abstract Syntax Trees (AST).
- Built the backend with Django for rule processing and PostgreSQL for data storage, while using React.js for a user-friendly frontend.

Programming Achievements

- Secured 2nd place in **CodeSprint 2024**, a competitive contest focused on advanced data structures and algorithmic challenges.
  Achieved a maximum rating of 1601 (3*) on **CodeChef**, having solved over 200 problems. View Profile.
  Completed over 100 problems on **LeetCode**. View Profile.
  Achieved a maximum rating of 1135 (Newbie) on **Codeforces**, having solved over 300 problems. View Profile.

Certifications

Mastering Data Structures and Algorithms using C and C++ - Certificate Link | *C, C++, Creative Problem Solving, Data Structures*
IBM Full Stack Software Developer - Certificate Link | *Github, python, Django, Sql, PostgreSQL, RabbitMQ, PUB-SUB Architecture*