

ROSHAN PAUDEL

Vermillion, South Dakota, SD 57069, United States (Open To Relocation)

+1 (737) 279-2911 | roshanpaudefofficial@gmail.com | <https://www.linkedin.com/in/roshan-pau-del-a36b7618b>

PROFESSIONAL SUMMARY

- Experienced Full Stack Developer with over 4 years of expertise in designing and building scalable web applications using Java, Node.js, Python, and React, specializing in microservices architecture, event-driven systems (Kafka, RabbitMQ), and secure API development. Proficient in databases like MongoDB, PostgreSQL, Elasticsearch, and QDrant, with a proven track record of delivering high-quality, client-focused solutions.
- Cloud & DevOps Specialist, skilled in AWS (EC2, S3, RDS), Docker, Kubernetes, and CI/CD pipelines, with hands-on experience in system monitoring using Prometheus/Grafana and AI/ML integration for recommendation systems and GAN-based data augmentation.

WORK EXPERIENCE

IDenTV LLC | San Francisco, CA | Software Engineer (Remote)

03/2022 - 12/2023

- Developed and optimized microservices architecture using gRPC, RabbitMQ, and Kafka for real-time event processing, efficient communication, and scalable data pipelines in distributed systems.
- Designed distributed system architectures leveraging MongoDB, MySQL, PostgreSQL, Elasticsearch, and Qdrant, providing robust, scalable, and efficient data management for high-performance applications.
- Led an Agile team of five developers, managing sprint planning, mentoring, and code reviews to ensure timely delivery.
- Built gRPC endpoints for a product recommendation system powered by collaborative filtering and image vector embeddings, utilizing AI and ML technologies for personalized user experiences with QDrant Vector Database.
- Wrote microservices for event-driven architecture using Kafka and RabbitMQ, reducing latency and optimize data flow.
- Implemented CI/CD pipelines with CircleCI, automated containerization using Docker, and managed Kubernetes orchestration to streamline deployments and enhance system scalability and reliability.
- Integrated Prometheus and Grafana for monitoring, reducing downtime by 30%, improving log management, and ensuring real-time insights into application performance and system health which led to increased 15% sales of product.
- Conducted PR reviews and implemented version control strategies, ensuring code quality, maintainability, and alignment with project requirements throughout the software development lifecycle.
- Worked closely with international clients, gathering requirements, delivering scalable solutions, and optimizing application performance to meet project goals and exceed client expectations.
- Created comprehensive API documentation using OpenAPI V3 and Postman, ensuring seamless integration, reliable interfaces, and effective collaboration between development and external teams.
- Collaborated with DevOps to enhance workflows by integrating Prometheus and Kafka, improving debugging processes and achieving real-time system reliability improvements.

Environment: Node.js, Python, gRPC, RabbitMQ, Kafka, MongoDB, MySQL, PostgreSQL, RESTful APIs, Docker, AWS EC2, CircleCI, GitHub, Elasticsearch, QDrant, Kubernetes, Prometheus, Grafana, OpenAPI V3, Chai, Mocha, Sinon.js, Selenium, Project Management, Microservice Architecture, API Testing, Debugging, Optimization, Deployment

Leafnode Technology | Kathmandu | Full Stack Developer (MERN Stack)

06/2021 - 03/2022

- Designed and implemented database schemas and REST APIs to streamline business operations, ensuring efficient data handling, seamless front-end integration, and improved performance for critical applications and workflows.
- Integrated secure payment gateways, including PayPal and Stripe, into a MERN stack e-commerce platform, enhancing user experience and enabling smooth, secure, and efficient online transaction processing.
- Applied AES-256 encryption techniques to safeguard sensitive data, demonstrating a commitment to data security while ensuring compliance with industry standards and protecting critical user information.
- Built strong client relationships by consistently delivering high-quality projects ahead of deadlines, fostering collaboration, and driving client satisfaction through excellent communication and timely solutions.
- Optimized APIs and deployed scalable services on AWS EC2, improving application performance, ensuring high reliability, and supporting business growth through efficient cloud-based infrastructure management.

Environment: Node.js, Express.js, React JS, RESTFUL APIS, MongoDB, PostgreSQL, AWS EC2, Git, AES-256, CI/CD, Git Workflow, Socket.io, Next.js, Redux, Context-API, SMS Notification, Real Time Insights, PayPal, Stripe

- Designed and developed RESTful APIs using Node.js to optimize business logic, leveraging advanced MongoDB aggregations that reduced query execution time by 50% and improved overall server performance.
- Integrated APIs with React-based web applications to enable seamless user interaction, facilitating dynamic, real-time data flow and improving front-end functionality for an enhanced and engaging user experience.
- Built real-time features using Socket.io, enabling functionalities such as live chat and notifications, which significantly improved user engagement and application responsiveness in high-demand environments.
- Implemented secure authentication and authorization mechanisms using JWT, ensuring robust access control, safeguarding sensitive user data, and preventing unauthorized access to critical application resources.
- Deployed and managed Node.js applications on AWS LightSail, configuring domains, automating backups, and monitoring server performance to ensure reliable deployments and uninterrupted service across environments.

Environment: HTML5, CSS3, JQuery, JavaScript, Node.js, Express.js, Socket.io, JWT, React, MongoDB, RESTful APIs, Git, Trello, Jira, Twilio, Socket.io, AWS S3, AWS LightSail, Swagger Docs

TECHNICAL SKILLS

• Programming Languages	C, C++, Python, Java, JavaScript
• Front-End	React, Next JS, TypeScript, JavaScript, HTML5, CSS3, jQuery, AJAX
• Frameworks & Libraries	Spring (3.x/4.x/5.x), Spring Boot, JPA, Express.js, Node.js
• Microservices & APIs	RESTful Web Services, SOAP, Socket.io, gRPC, Apache Kafka, RabbitMQ
• Data Access	Hibernate, JDBC, JPA, Mongoose, Sequelize, TypeORM, Knex.js
• Databases	MySQL, PostgreSQL, Oracle, SQL Server, MongoDB, Firebase, Elasticsearch, QDrant, DynamoDB, Redis
• Cloud Services	AWS (EC2, S3, Lambda, ECS, RDS, IAM, CloudWatch), GCP, Azure
• DevOps & CI/CD	Docker, Kubernetes, Jenkins, GitLab CI/CD, Git, GitHub, Maven
• Testing	JUnit, Mockito, Selenium, Jasmine, Cucumber, Chai, Sinon JS, Jest, Mocha JS
• Security & Authentication	Authorization, Encryption, IAM, MFA, JWT, OAUTH, OAUTH 2.0, SAML, SSO
• IDEs	IntelliJ IDEA, Eclipse, VS Code
• Documentation	Swagger, OpenAPI
• Logging & Monitoring	Log4j, Splunk, CloudWatch, Winston
• Version Control	Git, GitFlow, SVN
• Collaboration Tools	Jira, Confluence, Trello
• Design Patterns	MVC, Singleton, Factory, Prototype, Observer, Decorator, Event-Driven
• Methodologies	Agile/Scrum, Test-Driven Development (TDD)
• Web Servers	Tomcat, JBoss, Nginx, Apache, Node.js, Fast API, Express JS

EDUCATION

Master of Science in Computer Science - University of South Dakota, Vermillion, South Dakota

GPA: 4.0

Courseworks: Software Engineering, Web Application Development, Artificial Intelligence, Machine Learning, Natural Language Processing (NLP), Reinforcement Learning, Computer Vision, Pattern Recogn and Machine Learning, Distributed Systems, Data Mining, Computer Networks, and many more.

PERSONAL PROJECTS

- Retrieval Augmented Generation (RAG) (2024)** – Implemented a Retrieval Augmented Generation framework to significantly reduce hallucinations in large language models (LLMs) and improve the quality of model responses. By integrating an external knowledge base with GPT-3.5 Turbo, the model was able to retrieve relevant information in real-time, leading to more accurate and contextually relevant answers. This approach enhanced the overall reliability of the model for generating responses based on specific, fact-based queries.
Technologies Used: React JS, Elasticsearch, Python, GPT-3.5 Turbo (LLM), Fast-API.
- Chat Docs- Interact with Documents (2024)** – Developed a platform that enables users to create spaces, upload PDF documents, and interact with their content through a chat interface. Users can ask questions related to individual documents or the entire space, enhancing document engagement and improving reading efficiency. The system integrates a conversational interface powered by GPT-4 Mini, allowing for dynamic interactions with the documents.
Technologies Used: React JS, Python (FastAPI), Node JS (OAuth), JWT, GPT-4 Mini (LLM), MongoDB, Swagger Docs.