

# Karan Parwani

Senior Software Engineer, Senior Backend Engineer, Junior Blockchain Engineer, FinTech Developer, Full Stack Engineer

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Portfolio: <https://karanparwani.github.io/Portfolio>

Github: <https://github.com/KaranParwani>



## PROFESSIONAL SUMMARY

Experienced Senior Software Engineer with 4+ years of building scalable backend systems from scratch in FinTech, Digital Banking, and HR Tech startup environments. Proficient in Python and Node.js, with a strong focus on secure, high-performance APIs and microservices. Skilled in cloud and DevOps tools like AWS (EC2, S3, SES), Docker, and microservice architecture. Experienced in integrating compliance features such as KYC/AML and in-banking APIs for financial platforms. A blockchain enthusiast actively learning Solidity, with hands-on experience integrating Ethereum-based features including wallet transactions, crypto payments, and dynamic gas pricing into backend systems. Known for taking ownership in startup settings, leading engineering efforts end-to-end, mentoring teammates, conducting code reviews, and driving delivery in agile, fast-paced environments.

## SKILLS

**Programming Expertise:** Python, JavaScript, Node.js, Solidity, Web3.

**Technical Skills:** API Development, Database Management & Programming, Blockchain Integration, Cloud Deployment, Smart Contract Testing, RESTful Services, Performance Optimization, Version Control (Git, GitLab), Software Development Life Cycle (SDLC), Continuous Integration (CI), Web Applications, RDBMS.

**Technological Expertise:** Docker, Docker Compose, AWS Services, MongoDB, PostgreSQL, MySQL, NoSQL, Webhooks, RabbitMQ, Redis.

**Tools & Web Frameworks:** AWS (EC2, S3), Fastapi, Flask, Express.js, React.js, Django, Flyway Migrations, Nginx, PM2, Git (Version Control), Auth0 by Okta, Sumsb Integration, Safe Global.

**Operational:** Team Leadership, Technical Documentation, Agile Methodologies, API Security, Solution Architecture, Entry-Level DevOps Engineer.

## CORE SKILLS

**API Development:** Experienced in designing, developing, and optimizing RESTful APIs, GraphQL APIs, and microservices for seamless integration and scalability.

**Microservices Architecture:** Skilled in designing, implementing, and maintaining microservices-based systems with a focus on scalability, resilience, and real-time communication.

**Blockchain Development:** Gaining hands-on experience in smart contract development, exploring decentralized applications (DApps), and familiarizing with blockchain infrastructure concepts.

**Team management:** Mentoring and overseeing a team of two backend engineers, focusing on code reviews and continuous integration.

**Database Management:** Skilled in designing and managing relational (PostgreSQL, SQLite, MySQL) and NoSQL (MongoDB) databases with a focus on performance and scalability.

**Cloud and DevOps:** Proficient in cloud deployment (AWS, EC2), containerization (Docker).

**FinTech Solutions:** Expertise integrating banking APIs, KYC/AML integrations, payment platforms integration, and identity and access management (IAM).

**Problem-Solving:** Strong analytical skills with a focus on resolving complex technical issues and optimizing system performance.

## EXPERIENCE

Universal Assets Bank

*Dubai, United Arab Emirates*

**Software Engineer**

Apr '23 – Present

Website - [universalassets.com](https://universalassets.com)

- Spearheaded the design and development of a scalable digital banking backend system using Python and Node.js, comprising 7 modules with PostgreSQL for transactional data and MongoDB for unstructured data like crypto transactions.
- Deployed 8 microservices with a unified API endpoint through AWS API Gateway, ensuring secure and seamless communication added caching mechanism through redis for frequently accessed data that resulted in 60% increase in system performance.
- Leveraged RabbitMQ for inter-service communication, webhooks for real-time frontend notifications, and Grafana with Loguru for monitoring.
- Implemented Access Control Lists (ACLs) at the backend based on a Decision Matrix, enabling precise authorization and control over user actions. This enhanced security and ensured a 90% secure transaction flow.
- Developed secure APIs with JWT authentication and a rules-based encryption engine for encrypted payload processing, ensuring efficient and secure frontend/backend communication using cryptographic methods.
- Integrated Ethereum smart contracts via Python Web3, enabling blockchain functionalities such as cryptocurrency transactions and dynamic gas price calculations using CoinGecko APIs.
- Led and mentored a team of two developers, conducting code reviews, aligning technical solutions with strategic goals, and actively expanding expertise in blockchain technologies.
- Enhanced application performance by implementing caching mechanisms and optimizing database queries for frequently accessed data, significantly reducing latency and improving user experience.
- Successfully launched and deployed version 1 of the product, enabling seamless onboarding for both corporate and individual customers.

Intellica LLP

*Ahmedabad, India*

**Associate Software Engineer**

Aug '21 – Feb'23

Website - [rootle.ai](https://rootle.ai)

- Rootle is an AI-powered application designed to help businesses automate candidate calls based on their CV and ATS data.
- Developed APIs using FastAPI and Flask with JWT authentication, adhering to Object-Oriented Programming (OOP) principles where applicable, and implementing background task processing.
- Optimized database performance by creating and testing RAW SQL and PL/SQL queries, improving system efficiency by 50%.
- Integrated AWS services to enhance functionality, including SES for email notifications, S3 for fast data retrieval, and Twilio for automated calling services.
- Collaborated with a team of 9 developers (frontend and backend engineers) to accelerate project development timelines.
- Participated in code reviews with senior developers, incorporating suggestions and optimization techniques to improve the scalability and maintainability of the codebase for long-term use.

**Software Engineer Trainee**

Nov '20 – Mar'21

- Actively learning programming languages like Python, JavaScript, Web Scraping, and actively learning HubSpot CMS to enhance coding abilities and adapt to new tools and technologies.
- Skilled in teamwork and participating in code reviews to maintain high code quality, identify areas for improvement, and stay updated with emerging technologies.

## EDUCATION

Gujarat Technological University

Ahmedabad, India

**Master's** in Computer Application

2018 – 2020

- Focused on advanced software development, database management, and system design principles. Completed multiple projects, including a capstone project on Django E-commerce.

Gujarat University

Ahmedabad, India

**Bachelor's** in Computer Application

2015 – 2018

- Gained foundational knowledge in programming, data structures, and web development. Actively participated in tech workshops and coding challenges.

## PROJECTS

**Generate Wallet Address** – [GitHub](#)

- Developed and deployed a smart contract on the Ethereum Sepolia testnet to dynamically generate wallet addresses, leveraging tools like Infura, Web3.py, and Hardhat.
- Integrated Web3.py for seamless blockchain interaction, utilizing event logs for data extraction while addressing challenges such as HexBytes slicing, checksum validation, and gas estimation.
- Gained hands-on experience with Ganache, ensuring reliable smart contract functionality through debugging and compliance with Ethereum standards

**Monitor Blockchain Transactions** – [GitHub](#)

- Utilized Web3 technology to scan the Sepolia Testnet for incoming and outgoing transactions associated with a specified wallet address, saving detected transactions into a database.
- Efficiently recorded and managed transaction data for seamless storage and retrieval.
- Developed an API to enable dynamic control and management of the transaction indexer.

**Blockchain-Based Voting System** – [GitHub](#)

- Developing a decentralized voting application leveraging blockchain technology to ensure transparency, security, and immutability in the voting process.
- Utilizing **React.js** for a dynamic user interface, **Node.js** for the backend, and **Solidity** for writing smart contracts deployed on the **Sepolia testnet** or **Hardhat**.
- Incorporating Web3.js for seamless interaction between the frontend and the blockchain, enabling real-time updates and user authentication through wallets like MetaMask.

## CERTIFICATIONS

- Meta Backend Developer Professional Certificate ([link](#))
- Achievements in HackerRank ([link](#))