Mahendra M R

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EXPERIENCE

Foundry Digital – *Software Engineer*   **Bengaluru, India**
Technology Stack: JavaScript, React, Node.js, Datadog, HTML, CSS, Rainbow Kit, Git   *Oct 2023 – Dec 2024*

- Built Node.js(NESTJS) tools for blockchain metrics and node performance monitoring, optimizing concurrency, and resource management to ensure high performance and scalability.
- Ensured high uptimes (99%) and accurate payouts for staking operations.
- Integrated public Ethereum APIs to facilitate seamless Ethereum staking operations.
- Automated Jira ticket creation by processing emails received via the "Contact Us" link on the website.
- Developed functionality to generate CSV documents from JSON responses which contains transactions history.
- Monitored node metrics with Datadog to enhance reliability and operational insight.
- Identified and resolved node issues to maintain performance.
- Created and managed Vault and Nomad configurations and JFROG for dockerizing the node clients for SSV, Obol, Solana, AVAX, Livepeer, NEAR, and DOT nodes.
- Utilized agile development methodologies with Jira to collaborate effectively across teams and track progress, ensuring timely delivery of features.

SKILLS

Languages: Python, JavaScript, TypeScript, Java, C, HTML, CSS, SQL, C#
Frameworks & Tools: React, FastAPI, Node.js, NestJS, Docker, LangChain, ChromaDB, Git, Jira, GitLab, ASP.Net, VB.Net,
Domains: Blockchain Technology, Bitcoin Mining, Staking, Gen AI, RAG, Encryption (AES-GCM)

PERSONAL PROJECT

Smart Password Manager
Developed a secure password manager application using FastAPI and React, featuring encrypted vault storage, JWT-based user authentication, and audit logging. Implemented full CRUD operations with AES-GCM encrypted password storage and real-time UI updates via Redux Toolkit. Designed and integrated an analytics dashboard to visualize user password data trends (in progress). Utilized Docker for containerization, PostgreSQL with Alembic for reliable database migrations, and emphasized security by applying Argon2 for password hashing.

Legal Assistant Chatbot
Designed and developed an AI-driven legal assistant using FastAPI, LangChain, and Ollama with local open-source LLMs like Mistral. Implemented a Retrieval-Augmented Generation (RAG) pipeline with ChromaDB and HuggingFace embeddings to search and summarize Indian legal documents, including the IPC and Constitution. Built RESTful APIs to handle legal queries and generate context-aware responses. Backend is fully containerized with Docker, frontend leverages Next.js App Router to replicate a ChatGPT-style interface.

Ethereum Validator Tracker
Ethereum Validator Tracker is a React-based web application that provides detailed statistics on Ethereum validators using the beaconcha.in API. The app features a responsive design, interactive sidebar, and a top validators component listing the top ten validators based on their Ethereum balance

EDUCATION

Indira Gandhi National Open University   **Bengaluru, India**
Master of Computer Applications – Pursing   *January 2024 – Now*

National College Basavanagudi   **Bengaluru, India**
Bachelor of Computer Applications - CGPA 7.07/10   *October 2020 – August 2023*

ADDITIONAL DETAILS

Strengths: Highly motivated, ability to learn quickly, capable of working with minimum supervision

Languages Known: English, Kannada, Hindi