

Rajashekar Vennavelli

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Professional Experience

Software Engineer | Fetch.ai

November 2024 – Present

- Leveraged Fetch.ai's **uAgents framework** to **deploy AI agents** enabling autonomous decision-making and efficient communication within the Fetch.ai network, and contributed to feature enhancements in the **Fetch SDK**.
- Developing collaborative **Multi-agent applications** and **Agentic workflows** with AgentVerse, facilitating seamless interaction between agents built using frameworks like LangChain, LangGraph, and LlamaIndex workflows for integrated task execution.
- Led **educational workshops** on building AI agents using **Fetch.ai ecosystem** tools and provided **mentorship** during hackathons.
- TechStack:** Fetch SDK, uAgents, LangChain, Python, React, Javascript, LangGraph, LlamaIndex

Software Engineer Intern | AtlasNova AI

Jan 2024 – Oct 2024

- Engineered **event-driven** workflows using **AWS Lambda & S3 triggers** that automates multi-modal content processing pipelines.
- Developed an AI-driven document generation feature integrated with LLMs like GPT-4, Claude, and Gemini, enabling the creation of **5,000+ knowledge base documents** weekly with custom **RAG pipelines**, achieving a **35% boost** in search relevance.
- Implemented highly scalable **RESTful API** endpoints with AWS API Gateway & Lambda, handling over 10K concurrent requests.
- Optimized RAG pipeline by **75%** with **Pinecone** using optimized token based chunking, hybrid search, and hierarchical filtering.
- Engineered secure file upload system using **S3 presigned URLs**, reducing server load by 70% through direct client-to-S3 uploads.
- Developed a multi-step project creation interface in **React.js**, with dynamic template customization and drag-and-drop workflows.
- TechStack:** ReactJS, Express, JavaScript, NodeJS, DynamoDB(NoSQL), AWS(S3,Lambda), Python, Pinecone

Senior Software Engineer | World Bank, GECE

April 2020 – May 2022

- Implemented One-UI architecture in ACE Analytics, streamlining module onboarding with a single setup usable across multiple environments, thus addressing **cross-environmental challenges** effectively.
- Reduced **integrated testing** time by **20%** in each environment using One-UI, enabling better testing quality assessment.
- Transitioned ACE Analytics platform from a **monolithic** to **microservices** architecture, overcoming challenges like adapting single-instance only features for **multi-instance** compatibility and intelligent feature segregation based on behavior.
- Architected a **serverless AWS framework** with **Lambda** and **API Gateway** for efficient metadata storage in **DynamoDB**.
- Enhanced our application with **Openshift**, cutting latency from **7 to 3 sec** and boot time by **60%**, achieving scalability.
- Integrated Screen Auto Refresh in RRTS application, reducing manual refreshes by **90%** and increasing user engagement by **20%**.
- Developed **end-to-end application** to **asynchronously** trigger an ML model and it's responses, enhancing operational efficiency.
- Documenting **DevOps** related technical information and activities using **Confluence**, facilitating collaboration with cross-functional teams, and ensuring seamless access to pertinent information for all stakeholders.
- TechStack:** Java, SQL, ReactJs, Ajax, Openshift, AWS(Lambda, EC2, S3,SQS), Javaspark, DynamoDB(NoSQL)

Software Engineer | CITI Bank

July 2018 – March 2019

- Attained **90%** improvement in **Hadoop** resource allocation by developing a orchestration service using **YarnAPI's** for **Spark** jobs.
- Spearheaded **SDLC** for ETL application, handling Charge-Off customer accounts during ENR calculation for **30M** accounts.
- Implemented **backend cloud service** for real-time status updates to clients, enhancing communication post each stage completion.
- Documented and tested **REST API's** using JSON Schema in **Postman** and **SwaggerIO**, covering **50+** test cases.
- Created an automation **microservice** to create 280 data links in Datameer with **JSON** payloads, using **Spring Boot** and **Java**.
- Leveraged **Bitbucket** for well-documented and maintained API codebase, ensuring streamlined collaboration, development.
- TechStack:** Java, SQL, SpringBoot, JSON, Bitbucket, Jenkins, JUnit, Hadoop, SwaggerIO, PostMan, Kafka, CI/CD

Hackathons - Achievements

13 Hackathon Wins | Across 25+ Prestigious International Hackathons | [Devpost Portfolio](#)

Jan 2023 – Present

- 1st Place:** UC Berkeley AI Hackathon 2024, UCLA Hacks 2024, INRIX x AWS AI Hackathon 2024, CalHacks 2023, HackMIT 2023
- 2nd Place:** CalHacks 2024, HackUTD 2023, Michigan Hacks 2023, Hack for Social Impact (San Francisco), HackMIT 2024 (Boston)
- Launched **20+ full-stack** web apps across diverse domains, including **healthcare, climate, edTech, voice AI, robotics, social good, emergency systems, financial literacy**, dedicating **7+ hours** to ideation, **20+ hours** to development per project.

Education

Masters in Computer Science (GPA - 3.62/4.0)

Sep 2022 – June 2024

Santa Clara University

Santa Clara, CA

Bachelors in Computer Science and Engineering (GPA - 3.56/4.0)

June 2014 – June 2018

PSG College of Technology

Coimbatore, TN

Technical Skills

Languages & Databases: Java, C++, Python, MySQL, DynamoDB, MongoDB, S3

Frameworks & Technologies: Spring Boot, Restful API, Microservice, ReactJS, NextJS, JUnit, Mockito, Maven, Agile, AWS, Docker