



Aju John

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Data & AI Lead Engineer

Profile

Data & AI Engineering leader with deep expertise in data platforms, machine learning systems, and Generative AI applications. Over 13 years of experience designing scalable backend systems and enterprise data architectures, with recent focus on LLM-powered solutions, RAG systems, and real-time personalization engines. Experienced in leading cross-functional teams, defining AI architecture strategy, and delivering high-impact solutions on GCP and AWS. Strong background in data engineering, vector search, and production-grade AI integration.

Accomplishments

- Led a team of 6 engineers to build reliable AI and data systems, while setting up strong MLOps practices, system design, and production releases.
- Designed and launched personalization and recommendation systems that improved customer engagement and helped increase conversions.
- Built and scaled real-time data pipelines to handle large amounts of business data, making systems faster, more stable, and more dependable.
- Developed LLM and RAG-based applications to power smarter search and content understanding, improving how users find information.
- Implemented vector search and semantic search solutions that made product discovery more accurate and supported deeper business insights.

Technical Proficiencies

Data Engineering & Architecture:	Data Pipelines, ELT/ETL, Data Warehousing, Data Modeling, Dagster, Airflow, BigQuery, BigTable, Kafka, Red Panda, Redis, MongoDB, MySQL, Spark / PySpark, Data Lakes / Lakehouse
AI & ML:	LLMs, Retrieval-Augmented Generation (RAG), Embeddings, Machine Learning, Vector Search, MLOps, PgVector, Qdrant, LangChain, LangGraph, Scikit, TensorFlow, PyTorch, Keras, Agentic AI, Prompt Engineering, Sentence Transformers
Backend & API Development:	Python, PHP, FastAPI, Django, REST APIs, Microservices, PostgreSQL, Javascript, R, Elasticsearch
Cloud & DevOps:	Google Cloud Platform (GCP), AWS, Docker, Kubernetes, CI/CD, Grafana

Professional Experience

Data & AI Lead Engineer, Central Group, Bangkok City, Thailand

Aug 2021 to Oct 2025

At Central Group, led a team of engineers while focusing on designing and implementing data engineering solutions to enhance business analytics and insights. Worked closely with cross-functional teams to streamline data processes and improve data reliability. Developed robust data pipelines and integrated various data sources to ensure seamless data flow across platforms. Utilized expertise in software development to contribute to the overall improvement of data infrastructure.

- Built Strainer personalization engine serving 10M+ users across Central Group's retail ecosystem
- Developed Tops Chefbot, Thailand's first AI-powered recipe assistant with 50K+ product integration.
- Architected Feed Fusion marketing automation platform for cross-channel campaign optimization
- Designed and deployed production-grade Retrieval-Augmented Generation (RAG) systems using LLMs, FastAPI, embeddings, and PostgreSQL pgvector, incorporating MLOps practices for model deployment, monitoring, and performance optimization.
- Built scalable data pipelines, increasing speed by 30% and accuracy by 25%.
- Collaborated with analytics teams to optimize data workflows, improving reporting efficiency by 20%.

Full Stack Developer, Property Finder, Dubai, United Arab Emirates

Dec 2018 to Jul 2021

Focused on building and refining web applications, contributing to both backend and frontend development at Property Finder. Worked closely with cross-functional teams to ensure seamless integration and performance optimization. Applied expertise in various programming languages to enhance user experience and system reliability. Played a key role in implementing new features and resolving complex technical issues, leading to improved application functionality.

- Developed and maintained robust web applications, resulting in a 20% increase in user engagement.
- Collaborated with design and development teams to streamline frontend and backend processes.
- Implemented new features that improved application speed by 15%, enhancing user satisfaction.
- Resolved critical technical issues, reducing system downtime by 30%.

Associate Projects, Cognizant, Pune, Maharashtra, India

Oct 2016 to Nov 2018

Designed and delivered software solutions at Cognizant, contributing to an end-to-end healthcare diagnostics platform for Roche (US) focused on cancer detection from tissue images. Worked as a Frontend Engineer, building high-performance medical imaging interfaces using OpenSeadragon for viewing and analyzing high-resolution pathology slides. Collaborated with cross-functional and international teams to ensure seamless delivery, improved system reliability, and supported faster, more efficient diagnostic workflows.

Sr Software Engineer, Cuelogic Technologies Pvt Ltd, Pune, Maharashtra, India

Sept 2015 to Oct 2016

Designed and developed scalable web applications in the medical domain using PHP, handling both frontend and backend development. Built performance-optimized features, improved system stability, and enhanced user experience. Collaborated with cross-functional teams to deliver reliable healthcare-focused solutions, achieving faster load times and higher user engagement.

Senior Software Engineer, Makaan.com Pvt Ltd, Gurgaon, India

Aug 2014 to Aug 2015

Focused on building responsive, user-friendly web interfaces to enhance user experience. Developed and integrated new features while ensuring compatibility with existing systems. Optimized site performance, reducing load time by 20%, and maintained high code quality through regular reviews. Collaborated with cross-functional teams to deliver seamless, high-impact solutions that improved user engagement and satisfaction.

SOFTWARE ENGINEER, Uneva, Allahabad, India

Jul 2012 to Jul 2014

Developed and maintained software applications, improving system performance and user experience. Contributed across the full development lifecycle including coding, testing, debugging, and code reviews. Collaborated with cross-functional teams to resolve technical issues and deliver reliable, high-quality features. Continuously learned and adopted new technologies to enhance product performance and usability, achieving a 30% performance boost and 20% improvement in usability.

Junior Developer, KNOWLETT LABS, Allahabad, India

Jan 2012 to Jul 2012

Gained hands-on experience in a professional development environment, contributing to software components and improving code efficiency. Supported coding, debugging, and testing activities while learning development workflows. Participated in code reviews and collaborated with team members to resolve technical issues, while continuously building skills in new programming languages and tools.

Education

SAM HIGGINBOTTOM INSTITUTE OF AGRICULTURE, TECHNOLOGY & SCIENCES, Allahabad

Master of Computer Applications, Jan 2009 to Jan 2012

- Silver Medal for academic merit
- Concentration: Computer Science and application development

Links

<https://www.linkedin.com/in/ajujohn2009/>, <http://www.ajujohn.me>

Areas of Expertise

Data Engineering, ELT Front End Engineering Google Cloud LangChain, LangGraph RAG (Retrieval Augmented Generation) Scikit, TensorFlow, PyTorch, Keras	Full Stack Development Python Data Warehousing Vector DBs, Redis FastAPI, Django	AI ML Engineering MySQL, MongoDB Docker, Kubernetes OpenWebUI, Grafana PostgreSQL/pgvector	Data Pipeline Design Kafka, RabbitMQ Dagster, Airflow GCP, AWS Microservices Architecture
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Languages

Malayalam, English, Hindi

Licenses & Certifications

Google Cloud: Core Infrastructure, Coursera

Sept 2021

BigQuery for Data Analysts, Coursera

Aug 2021

Data Engineering, IBM

Jan 2026

Gen AI: Beyond the Chatbot, Google Cloud

Jan 2026

Machine Learning, University of London

Jan 2026