

# Balaji Kamalakkannan

Chief Technology Officer (CTO) – HERE AND NOW AI – Artificial Intelligence Research Institute

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## Professional Summary

Highly skilled and detail-oriented technology expert with deep, hands-on knowledge in AI system architecture, full-stack development, and immersive technologies. As CTO of HERE AND NOW AI, he specializes in designing, building, and deploying Generative AI platforms, RAG-powered knowledge systems, and enterprise-grade multi-agent frameworks using LangChain, LangGraph, and advanced open-source LLMs.

Has developed **200+ AI-powered applications** and **100+ intelligent agents** across multiple domains, enabling automation, predictive analytics, and immersive learning. Recognized for leveraging GitHub Copilot, cloud-native tools, and optimized DevOps practices to accelerate development workflows by up to 10x.

Possesses extensive expertise in JavaScript frameworks (AngularJS, VueJS, ReactJS), C#, .NET, Unity, and AR/VR technologies, delivering impactful solutions for industries including education, fintech, manufacturing, and healthcare.

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## Experience

### Chief Technology Officer

#### HERE AND NOW AI

*Jan 2025 – Present*

- Architected and deployed **enterprise-scale Generative AI platforms** integrating RAG systems, vector search (FAISS, ChromaDB, Pinecone), and multi-agent orchestration with LangGraph.
- Developed 200+ AI-powered apps and 100+ intelligent agents for automation, analytics, and decision support.
- Designed and delivered AI training programs, mentoring over 1,000 students and professionals in AI, Generative AI, and agentic frameworks.
- Introduced GitHub Copilot to development pipelines, achieving 10x faster project delivery.
- Managed cloud infrastructure across AWS, Azure, GCP, and self-hosted environments.
- Led AI immersion workshops and bootcamps for universities and corporate teams.
- Delivered mobile AI-enabled applications using Flutter for cross-platform deployment.

## CTO

### Hexagon Computers

Jan 2011 – Present

- Directed AR/VR learning and simulation tool development for education and industry.
  - Built proprietary hosting platforms with advanced security features.
  - Delivered cross-platform software solutions using AngularJS, VueJS, ReactJS, C#, .NET, Python, Unity, and XR SDKs.
  - Led and developed a **complete Check Truncation System (CTS)** for processing inward and outward clearing of HDFC Bank, ICICI Bank, and UCO Bank cheques for clients.
  - Implemented payment gateways for **HDFC** and **Paytm**, along with SMS and WhatsApp messaging gateways.
  - Completed large-scale backend and API development projects in **PHP** for enterprise applications.
  - Designed and deployed mobile apps using **Flutter** for enterprise and consumer solutions.
  - Oversaw cloud deployments, IoT integrations, and full-stack architecture.
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## Education

**AMIE – Electrical Engineering** – Institution of Engineers, India – 2009

Special Focus: Control and maintenance of electrical machines.

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## Technical Skills

**AI/ML Frameworks & Tools:** PyTorch, TensorFlow, Hugging Face Transformers, LangChain, LangGraph, OpenCV, Keras, scikit-learn, FAISS, ChromaDB, Pinecone

**Programming & Development:** Python, JavaScript, AngularJS, VueJS, ReactJS, C#, .NET, PHP, Node.js, HTML, CSS, Java, Flutter

**Cloud & DevOps:** AWS, Azure, GCP, Docker, Kubernetes, Jenkins, Terraform, GitHub Actions

**Databases:** MS SQL, MySQL, MongoDB, Postgres

**Immersive Tech:** Unity3D, Three.js, WebGL, ARKit, ARCore

**Other:** API integration, WebSockets, REST APIs, Cross-platform app development

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## Projects & Innovations

1. **Autonomous AI Professor Framework** – Multimodal teaching agent with adaptive learning using LLMs, LangChain, and RAG pipelines.
  2. **GenAI-Powered Financial Chatbots** – Enabled natural language financial decision-making.
  3. **AR/VR Simulation Toolkit** – Immersive training tools built with Unity and WebGL.
  4. **Multi-Agent Enterprise Automation** – Parallel and looping agents for large-scale operational tasks.
  5. **Full-Stack AI Dashboard Systems** – ReactJS + FastAPI platforms for real-time analytics.
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## Training & Impact

- Trained **1,000+** students and professionals in AI, Generative AI, and agentic systems.
  - Delivered hands-on AI workshops for academic institutions and corporate teams.
  - Contributed to open-source AI projects, advancing community-driven innovation.
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## Languages

English (Fluent), Tamil (Fluent), Hindi (Fluent)

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