

HARI KISHAN

Personal-Page | LinkedIn | GitHub | AI-Product-Demos

Chief Technology Officer (CTO) | Generative AI & Computer Vision Platforms | AI Platform Architect | Computer Vision | Generative AI | Distributed Systems | C++
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PROFESSIONAL SUMMARY

A Technology leader with 20+ years of experience delivering large-scale software platforms, distributed systems, computer vision solutions, and AI-driven products across enterprise and product engineering organizations. Proven track record of defining technology strategy, architecting scalable platforms, leading product innovation, and driving modernization initiatives from concept through production deployment.

Over the past several years, I have focused on building production-grade AI platforms spanning Computer Vision, Generative AI, Retrieval-Augmented Generation (RAG), Agentic AI workflows, LLM orchestration, edge inference, and intelligent automation systems. My experience combines deep systems engineering expertise in C/C++ with modern AI technologies, enabling successful integration of AI capabilities into real-world products and operational platforms.

As CTO of Pancait Smart Systems, I defined and executed the technology vision for PanEagle, an AI-powered surveillance and analytics platform. This included architecting distributed edge AI infrastructure, face recognition systems, software-defined NVR platforms, AI reliability frameworks, licensing infrastructure, and future-ready Generative AI capabilities.

RECENT AI PLATFORM & PRODUCT INITIATIVES

1) PAN EAGLE – Enterprise AI Surveillance Platform with Face Recognition, Intruder Detection & Software-Defined NVR

Defined the product vision and technology roadmap for an enterprise-grade AI surveillance platform, architecting a distributed multi-camera Computer Vision system integrating real-time face recognition, intelligent intruder detection, edge AI inference, event analytics, automated recovery, and a software-defined NVR. Led end-to-end platform development from concept to production, enabling scalable, autonomous, and enterprise-ready intelligent surveillance deployments.

2) PAN HAWK – Enterprise AI Face Recognition Attendance & Workforce Automation Platform

Conceived and led development of an AI-powered workforce automation platform that combines facial recognition, identity verification, attendance management, payroll integration, HR workflow automation, and intelligent analytics. Defined the overall platform architecture, AI pipeline, and enterprise integration strategy to deliver a secure, scalable, and contactless workforce management solution.

3) PAN OWL – AI-Powered Smart Home Security & Video Analytics Platform

Designed and productized a next-generation Edge AI security platform delivering real-time face recognition, intelligent video analytics, automated event detection, and autonomous monitoring for residential and SMB environments. Architected scalable Computer Vision pipelines, GPU-accelerated inference, and intelligent event-processing workflows to provide enterprise-grade AI capabilities on cost-effective edge hardware.

4) PAN FALCON – AI Upgrade Platform for Existing CCTV & IP Camera Infrastructure

Defined the strategy and architecture for an AI software platform that transforms existing CCTV and IP camera deployments into intelligent surveillance systems without requiring hardware replacement. Architected advanced AI capabilities including face recognition, intrusion detection, tamper detection, loitering analytics, behavioral intelligence, real-time alerts, and centralized monitoring—maximizing the value of customers' existing surveillance investments while enabling rapid enterprise AI adoption.

5) PAN MOR – AI Smart Video Doorbell Platform Using Existing Mobile Devices

Conceived an innovative AI-powered smart doorbell platform that repurposes smartphones, tablets, and USB/IP cameras into intelligent video doorbell systems. Architected seamless integration with the PAN EAGLE AI platform to

provide real-time face recognition, intelligent visitor identification, AI-driven voice alerts, event recording, and remote monitoring, delivering an affordable, software-defined alternative to traditional smart doorbell hardware.

Core expertise includes Technology Strategy, AI Platform Architecture, Generative AI, Large Language Models (LLMs), RAG Pipelines, Agentic AI Systems, Computer Vision, Distributed Systems, Edge AI, C++, Python, LangChain, Hugging Face, Vector Databases, MLOps, Performance Engineering, Platform Modernization, and Technical Leadership.

I am passionate about helping organizations adopt AI responsibly, modernize engineering platforms, and build scalable intelligent systems that create measurable business value.

PROFESSIONAL EXPERIENCE

- Pancait Smart Systems | Chief Technology Officer (CTO) | Bengaluru | Apr 2023 – Present
 - Kuti Software Tech Solutions (Cisco) | Principal Engineer, Senior Staff Engineer | Bengaluru | Mar 2021 - Apr 2023, Jan 2020 – Mar 2021
 - Infinera (Nokia) | Senior Staff Engineer | Bengaluru | Jan 2017 – Jan 2020
 - Cisco Systems | Software Engineer 4 | Bengaluru | May 2015 – Dec 2016
 - Alcatel-Lucent through Tech Mahindra | Technical Leader | Bengaluru | Jul 2011 – May 2015
 - Bosch (RBEI) | Senior Software Engineer | Bengaluru | Oct 2007 – Jul 2011
 - IBM | Software Engineer | Bengaluru | Mar 2006 – Oct 2007
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EDUCATION

- **M. Tech** (Information Technology - Networking) | Vellore Institute of Technology | 8.4 CGPA
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INDUSTRY AWARDS & RECOGNITIONS

- Selected by SiliconIndia for inclusion in its ***Top Artificial Intelligence in AI Powered Face Recognition Security 2026*** edition based on Pancait Smart Systems' innovations led by CTO in AI-powered Computer Vision and Face Recognition technologies.
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SKILLS

- **Technology Leadership:** Technology Strategy, Product Strategy, AI Transformation, Platform Modernization, Architecture Governance, Technical Leadership, Stakeholder Management, Innovation Management, Engineering Leadership, Customer-Facing Technical Consulting.
 - **Artificial Intelligence & GenAI:** Generative AI, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Agentic AI, LangChain, LangGraph, CrewAI, Hugging Face, Prompt Engineering, AI Workflow Automation, AI Reliability Engineering, AI Platform Architecture.
 - **Computer Vision & Edge AI:** Computer Vision, Face Recognition, Video Analytics, Edge AI, Distributed Edge Inference, GPU Acceleration, TensorRT, ONNX Runtime, Real-Time AI Systems.
 - **Systems Architecture:** Distributed Systems, High Availability (HA), Microservices, Event-Driven Architecture, Platform Engineering, API Design, Performance Engineering, Reliability Engineering, Scalability Architecture.
 - **Programming:** C, C++, Python, Object-Oriented Design, Design Patterns, STL, Multithreading, Data Structures, Algorithms, Systems Debugging, Performance Optimization.
 - **AI Infrastructure & Data:** Vector Databases (FAISS, ChromaDB), Semantic Search, Embeddings, Knowledge Retrieval Systems, MLOps, AI Observability, Model Optimization.
 - **Cloud & Infrastructure:** AWS, AWS Bedrock, OpenStack, Docker, KVM, QEMU, Linux Platform Engineering.
 - **Networking & Middleware:** TCP/IP, MQTT, RabbitMQ, Cisco IOS XR, Smart Licensing, QNX Neutrino, Distributed Networking.
 - **Domains:** Artificial Intelligence, Intelligent Surveillance Systems, Telecommunications, Optical Networking, Banking & Financial Systems, Embedded Systems, Enterprise Software Platforms.
 - **Methodologies:** Agile, Scrum, Continuous Integration, Continuous Delivery.
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INDUSTRIAL PROJECTS

PANCAIT SMART SYSTEMS | CHIEF TECHNOLOGY OFFICER (CTO) | BENGALURU | APR 2023 – PRESENT

KEY PRODUCTS & PLATFORM INITIATIVES

1) PAN EAGLE– Enterprise AI Surveillance Platform with Face Recognition, Intruder Detection & Software-Defined Network Video Recorder

Defined the product vision and technology roadmap for an enterprise-grade AI surveillance platform integrating distributed multi-camera face recognition, intelligent intruder detection, edge AI inference, software-defined NVR, and autonomous monitoring capabilities.

Key Contributions:

Conceived and led end-to-end product development from idea through architecture, implementation, deployment, and commercialization.

Architected a distributed AI platform supporting up to 16 concurrent camera streams with scalable edge inference, identity management, vector search, event correlation, and real-time analytics.

Directed development of a software-defined NVR platform featuring intelligent recording, event timelines, centralized dashboards, automated recovery, and fault-tolerant operations.

Established platform reliability engineering through self-healing orchestration, observability, watchdog services, and autonomous process management.

Defined licensing architecture, feature management, and enterprise deployment strategy supporting scalable commercial product offerings.

2) PAN HAWK – AI Face Recognition Workforce Automation Platform

Conceived and led development of an enterprise AI workforce automation platform integrating face recognition, identity verification, attendance management, payroll automation, and intelligent HR workflows.

Key Contributions:

Defined overall product strategy, AI architecture, and enterprise integration roadmap.

Architected biometric identity management, facial embedding pipelines, liveness detection, and secure workforce authentication.

Led integration with HRMS, payroll, audit, and enterprise business applications.

Established biometric governance, privacy policies, encrypted storage, and edge-cloud synchronization architecture.

Directed AI optimization initiatives delivering highly accurate and scalable enterprise workforce automation.

3) PAN OWL – AI Smart Home Security & Video Analytics Platform

Designed and productized a next-generation Edge AI platform delivering intelligent home security through real-time face recognition, AI video analytics, autonomous monitoring, and intelligent event detection.

Key Contributions:

Defined product architecture optimized for affordable edge hardware deployments.

Architected GPU-accelerated Computer Vision pipelines enabling low-latency inference and real-time analytics.

Led integration with RTSP, ONVIF, USB, IP cameras, and consumer surveillance ecosystems.

Established scalable event-processing, intelligent notification, and autonomous monitoring frameworks.

Designed deployment architecture enabling enterprise-grade AI capabilities on consumer-grade hardware.

4) PAN FALCON – AI Software Upgrade Platform for Existing CCTV & IP Camera Infrastructure

Defined the vision for an AI software platform that transforms traditional CCTV and IP camera deployments into intelligent surveillance systems without replacing existing infrastructure.

Key Contributions:

Architected AI overlays that retrofit intelligence into legacy surveillance installations.

Designed modular analytics supporting face recognition, intrusion detection, tamper detection, loitering detection, people counting, and behavioral intelligence.

Established centralized AI management architecture supporting multi-site enterprise deployments.

Defined enterprise integration framework for security operations, access control, and third-party surveillance ecosystems.

Enabled customers to modernize existing surveillance investments through software-driven AI transformation.

5) PAN MOR – AI Smart Video Doorbell Platform Using Existing Mobile Devices

Conceived an innovative software-defined AI video doorbell platform transforming smartphones, tablets, webcams, and IP cameras into intelligent visitor management systems.

Key Contributions:

Defined product strategy enabling AI-powered smart doorbell capabilities without dedicated hardware.

Architected seamless integration with PAN EAGLE AI services for real-time face recognition and visitor identification.

Designed AI voice announcements, intelligent alerts, visitor history, and cloud-edge synchronization.

Established secure remote monitoring architecture with AI-driven event recording and intelligent notifications.

Delivered an affordable software-first alternative to traditional smart doorbell ecosystems.

COLLECTIVE TECHNOLOGY & BUSINESS IMPACT

Across the PANCAIT SMART SYSTEM's product portfolio, successfully conceived, architected, productized, and led delivery of five AI-driven platforms spanning Enterprise Surveillance, Workforce Automation, Smart Home Security, AI CCTV Modernization, and Smart AI Doorbell solutions. Established the company's technology vision, AI platform architecture, engineering standards, and product roadmap while integrating Computer Vision, Edge AI, Generative AI, distributed systems, software-defined infrastructure, and enterprise-grade reliability. Led initiatives from concept through architecture, engineering, deployment, commercialization, and customer adoption, creating a scalable AI product ecosystem capable of serving enterprise, SMB, and consumer markets.

KUTI SOFTWARE TECH SOLUTIONS (CISCO) | PRINCIPAL ENGINEER, SENIOR STAFF ENGINEER | BENGALURU | MAR 2021 - APR 2023, JAN 2020 – MAR 2021

• Smart Licensing Agent for Cisco IOS XR

An end-to-end cloud based, networked smart licensing architecture which automatically manages, notifies all the customer bought licenses on their enterprise edge routers.

Responsibilities:

- Led system architecture design & modules Application level HA, License Admin API, Licensing CLI and Entitlement API.
- Worked with teams across multiple geographies, scrum master role, managed client interactions, triaging high-level issues, enforced best practices.
- Headed the deployment of OpenStack private cloud on-prem solutions for clients.
- Handled on critical issues ensuring timely closure for top clients (Google, Facebook, Amazon, Korea Telecom, KDDI), improved CSR, reduced SLA times, retained clients.
- Written and maintained documentation to describe program development, logic, coding, testing, changes, and corrections

• IOS XR distributed RTOS

An enterprise grade distributed network OS which is an RTOS and runs and manages all the data network traffic with ease.

Responsibilities:

- Improved overall system reliability, managed customer facing issues, scrum master, clearing technical blockages, team efficiency, guided team for closures.
- Provided technical vision, project roadmaps, and business analysis, transforming client requirements into actionable tasks, improved CSR, reduced SLA times, retained clients.
- Write and maintain all technical documents as and when needed
- Improved customer satisfaction, increased company profitability through process improvements, faster issue resolution, and enhanced team productivity.

INFINERA THROUGH KUTI SOFTWARE TECH SOLUTIONS | SENIOR STAFF ENGINEER | BENGALURU | JAN 2017 – JAN 2020

- **Optical Line System (OLS) [C++, STL, Design Patterns, Data structures, gdb, LTE platform, Scientific Linux SL release 5.5 (Boron)]**

CISCO SYSTEMS | SOFTWARE ENGINEER 4 | BENGALURU | MAY 2015 – DEC 2016

- **IP Infrastructure Development** [C++, Data structures, gdb, System programming, multithreading, IPC, Linux, IOS XR, Distributed OS, many cisco's proprietary technologies, Code collab, Clear Case, PKI, packet forwarding, TCP/IP, ARP, IP, distributed OS]

ALCATEL-LUCENT THROUGH TECH MAHINDRA | TECHNICAL LEADER | BENGALURU | JUL 2011 – MAY 2015

- **Hardware Resource Abstraction Layer (HRAL) Development** [C++, STL, Design Patterns, Data structures, gdb, LTE platform, Scientific Linux SL release 5.5 (Boron), IBM Rational Clear Case, IBM Rational Clear Quest]

BOSCH INDIA (RBEI) | SENIOR SOFTWARE ENGINEER | BENGALURU | OCT 2007 – JUL 2011

Clients – BMW, Lamborghini, Mercedes Benz, Mahindra, Ferrari, Volvo, Volkswagen, ETAS.

- **1 - CarPU ASIC Control Tool** (C++, Qt, Qmake, Qt Creator, gcc compiler, Windows.)
- **2 - DAMOS++ (DAta MOonitoring System)** (C++, gcc compiler, Windows, Linux, Proprietary Rmake32 (based on GNU-make), Code Syntax scripting, ESPRIT Software Build system for Gasoline Systems.)
- **3- ASCET – Advanced Simulation Control Engineering Tool** (C++, gcc compiler, Windows, Linux, Proprietary Rmake32 (based on GNU-make), Code Syntax scripting, ESPRIT Software Build system for Gasoline Systems)

IBM INDIA | SOFTWARE ENGINEER | BENGALURU | MAR 2006 – OCT 2007

Clients – JP Morgan Chase, Bank of America and other banks, USA.

- **View Pointe System – IBM India** - High Performance Archive for Banking System Development (C++, IBM xLC compiler, Design patterns, IBM AIX 5 (UNIX), Dev C++, gcc compiler, GNU make, MinGW runtime, GNU debugger, IBM DB2, DB2 CLI.)

ACCOMPLISHMENTS

TECHNOLOGY VISION, STRATEGY & AI TRANSFORMATION

- Defined and executed the company's long-term technology vision, AI strategy, and product roadmap, establishing Computer Vision, Edge AI, and Generative AI as the foundation for next-generation intelligent surveillance platforms.
- Founded and led development of a portfolio of AI-powered products spanning enterprise surveillance, workforce automation, smart home security, AI-enabled CCTV modernization, and software-defined smart doorbell platforms.
- Architected enterprise-scale AI platforms integrating Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Agentic AI, Computer Vision, distributed edge inference, and autonomous decision-making systems.
- Established scalable AI platform architecture encompassing distributed inference, model serving, vector databases, semantic search, AI orchestration, observability, licensing infrastructure, and reliability engineering.
- Directed modernization of legacy software platforms by integrating modern AI capabilities, cloud-native services, distributed architectures, and intelligent automation frameworks.
- Defined engineering governance, architecture standards, platform scalability principles, and technology roadmaps supporting sustainable product evolution and long-term business growth.
- Championed adoption of emerging AI technologies, continuously evaluating and integrating new frameworks, models, and deployment strategies to maintain product innovation and competitive advantage.

PRODUCT INNOVATION & BUSINESS GROWTH

- Led end-to-end product development from concept, architecture, and engineering through deployment, commercialization, customer adoption, and continuous product evolution.
- Translated customer challenges into scalable AI products by closely aligning technology strategy with market requirements and long-term business objectives.
- Built reusable AI platform components, Computer Vision frameworks, and solution accelerators that significantly reduced development effort and accelerated product delivery.
- Defined commercial licensing architecture, product editions, feature management, and deployment models supporting scalable enterprise and SaaS business opportunities.

- Represented the company in customer engagements, technical demonstrations, solution consulting, and strategic technology discussions, strengthening customer confidence and supporting business expansion.
- Drove product innovation by identifying emerging market opportunities and transforming them into commercially viable AI solutions.

ENGINEERING LEADERSHIP & ORGANIZATIONAL EXCELLENCE

- Built and led multidisciplinary engineering initiatives spanning AI, Computer Vision, distributed systems, backend platforms, cloud infrastructure, DevOps, and product engineering.
- Mentored engineers, architects, and technical leaders while fostering a culture of innovation, engineering excellence, technical ownership, and continuous learning.
- Led cross-functional collaboration across engineering, product management, operations, customer success, and business stakeholders to successfully deliver complex AI platforms.
- Established engineering best practices including architecture reviews, design governance, platform reliability, observability, quality engineering, automated recovery, and continuous product improvement.
- Promoted a startup engineering culture focused on rapid innovation, technical excellence, customer-centric development, and scalable product delivery.

TECHNOLOGY EVANGELISM & INDUSTRY LEADERSHIP

- Evangelized adoption of Generative AI, Computer Vision, Edge AI, and intelligent automation across products, engineering practices, and customer solutions.
 - Actively researched, evaluated, and prototyped emerging AI technologies to continuously enhance platform capabilities and maintain technological leadership.
 - Positioned AI as a strategic business differentiator through architecture-led innovation, solution demonstrations, and technology consulting.
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PROFESSIONAL RECOGNITION

- Recipient of multiple "Shine" and "Pat on the Back" awards for technical leadership, innovation, customer success, and engineering excellence.
- Recognized by customers, senior leadership, and global engineering teams for delivering scalable architectures, platform modernization initiatives, and mission-critical enterprise solutions.
- Received special recognition for introducing, evangelizing, and driving enterprise adoption of Generative AI technologies, intelligent automation, and AI-powered engineering practices.

TRAINING & PROFESSIONAL DEVELOPMENT

- Generative AI & Large Language Models (LLMs)
 - Retrieval-Augmented Generation (RAG) & Agentic AI Systems
 - LangChain, Hugging Face & AI Orchestration Framework
 - Machine Learning & Deep Learning
 - Computer Vision & Edge AI
 - AI Platform Engineering, MLOps & Inference Optimization
 - Distributed Systems Architecture & Platform Modernization
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More details can be provided over the call.
