

# CHAKRABARTI PALLAB

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**Enterprise Data & AI/ML Solution Architect | GenAI & Multi Cloud Strategist | Digital Transformation Leader**

## PROFESSIONAL SNAPSHOT

With deep expertise in **Enterprise Architecture (TOGAF, SAFe)** and **AI/ML-driven Digital Transformation**, I specialize in architecting and implementing **scalable, AI-powered, and multi-cloud solutions** that future-proof businesses. With **18+ years of full-lifecycle software engineering** and **12+ years leading cross-functional teams**, I have successfully driven **large-scale AI/ML transformations**. Worked across **Telecom (Verizon, California)**, **Defence (Singapore)**, **Banking (Deutsche Bank, DBS, GL Trade UK)**, **Healthcare, FMCG, Railway Management (Die Bahn, Germany)**, **ERP (Microsoft Dynamics 365)**, **CRM (Salesforce)**, **Hybrid Cloud Services**, and **HP's Retail & E-Commerce**.

- ✓ **AI-Optimized Print & Subscription Roadmaps** – Crafting AI/ML-driven architecture blueprints that enhance HP Instant Ink and Managed Print Services (MPS), ensuring predictive supply fulfilment, automated issue resolution, and adaptive subscription management.
- ✓ **GenAI-Powered Customer Experience** – Designing agentic solutions using LLMs (GPT, BERT, LLaMA, Mistral) to enable proactive print usage recommendations, intelligent chatbot assistance, and AI-driven self-healing workflows for seamless customer support using LangChain-powered Vector DB for retrieval-augmented generation (RAG) to personalize print insights.
- ✓ **Cloud & Legacy Modernization for Print Ecosystems** – Driving hybrid cloud strategies for HP's print fleet, migrating legacy print management systems to AWS and Azure, ensuring resilience, scalability, and AI-readiness for real-time device analytics. Enabling **Hartford's Insurance APIs**, to streamline **insurance-backed print services, warranty claims for large fleets**.
- ✓ **Data & Integration Architecture for Print Insights** – Implementing event-driven microservices, NoSQL, and Big Data platforms to unify print telemetry, ink consumption, and user behaviour analytics for hyper-personalized recommendations and predictive maintenance.
- ✓ **GenAI-Enabled Document & Image Processing** – Leveraging GPT, Stable Diffusion, and Whisper for AI-enhanced document classification, intelligent scanning, text extraction, and auto-summarization, transforming how users interact with print workflows.
- ✓ **AI-Enhanced Print Analytics & Decision Intelligence** – Utilizing predictive ML models (Random Forest, Gradient Boosting, XGBoost) for demand forecasting, anomaly detection in print usage, and dynamic pricing optimization for HP's subscription services.
- ✓ **Automated AI/ML Pipelines for Print & Ink Optimization** – Using KNIME to orchestrate AI workflows, optimize ink replenishment models, and automate machine learning pipelines for anomaly detection, fraud prevention, and supply chain efficiency.
- ✓ **Agile & SAFe-Driven AI Adoption in Print Services** – Enabling rapid AI innovation within HP's Managed Print and Instant Ink offerings through Agile methodologies, continuous iteration, and AI/ML Ops best practices to improve service agility and customer satisfaction.

### Let's Connect!

I am passionate about leveraging **AI, GenAI, and multi-cloud strategies** to revolutionize enterprises. Whether it's **data-driven decision-making, AI/ML-powered automation, or multi-cloud innovation**, let's collaborate to build the future!

## CORE COMPETENCIES

AI & Machine Learning Expertise | Cloud & Enterprise Architecture (SAAS|PAAS| IAAS) | Engineering Leadership and Agile Delivery | Strategic Innovation & Product Development (Git | Jira | GitCopilot) | Generative AI (Tensorflow | MLFlow) | LLMs (Large Language Models) | Predictive Analytics | Cloud Solutions | Cross-Functional Collaboration & Leadership | Cloud Computing & Serverless Solutions (AWS | Azure | Docker | OracleVM| Xen) | DevOps & CI/CD Pipelines | Enterprise Web Solutions & API Management | Data Engineering & Analytics | Business Transformation & Global Strategy | Digital Transformation | Patent Portfolio | Executive Stakeholder Management | Data Governance

## CAREER ACCOMPLISHMENTS

### HP Inc.:

- **Headed AI-powered personalization initiatives (Generative AI and LLMs)** for subscription platforms, enhancing retention by 25%.
- **Orchestrated the migration of critical systems to cloud-native solutions**, cutting 30% costs while ensuring 99.99% system availability.
- **Engineered predictive analytics solutions** that minimized supply chain inefficiencies by 20%.
- Spearheaded the expansion of HP's Managed Print Services(SAAS), establishing it as the industry leader.
- Led dynamic pricing models for HP Instant Ink, resulting in significant user retention and satisfaction improvements.
- Optimized agile delivery, reducing development time by 40% with AI tools like GitHub Copilot.

## Photon InfoTech:

- **Pioneered a NextGen Mobile-First Web Framework (PAAS)** for Johnson & Johnson, achieving a 40% cost reduction.
- **Designed a Sales Force Automation tool** for Coca-Cola Bottling United, fueling an 80% business growth in 3 months.
- **Developed the Gems Pervasive Cloud Framework** for Ethicon, integrating Drupal and J2EE to optimize deployments.

## Spike Source Software Inc.:

- **Optimized hybrid IAAS environments** using (OpenNebula, Eucalyptus & Xen) for enhanced scalability and reliability.
- Delivered superior software solutions through meticulous testing and debugging.
- Mentored cross-functional teams, driving innovation and aligning efforts with corporate objectives.

## PATENTS

- Printer fleet reconciliation & fuzzy matching
- AI-Powered Web Engine for Personalized User Experience and Dynamic Pricing Optimization
- Offline Solution to validate HP's Instant Ink Cartridges

## CORPORATE SUCCESS

### Since 2013: HP Inc., Bangalore, India | Senior Technical Expert - Technology Innovation Center

- Led AI-powered personalization initiatives and GenAI modeling, driving significant advancements in user experience and engagement. Led ERP (Microsoft Dynamics 365), and CRM (Salesforce) integrations with InstantInk SAAS ecosystem.
- Spearheaded the migration of enterprise systems (SNL, ProdX, Instant Ink), enhancing API integration, security, and analytics.
- Engineered data-driven solutions, leveraging GenAI to optimize product lifecycles and deliver personalized user experiences.
- Pioneered research in print technology as a service, merging cutting-edge computational techniques with scientific discovery.
- Directed multi-disciplinary teams, championing AI adoption and fostering cross-functional collaboration to elevate organizational innovation.
- Delivered impactful project outcomes, integrating technical expertise with strategic leadership to drive success across diverse domains.

### 2010 – 2013: Photon Infotech (P) Ltd., Bangalore, India as Senior Expert, Chief Architect & Technology Lead

- Steered the development of a NextGen Mobile-First Web Framework (PAAS) for Johnson & Johnson (FMCG, Healthcare), reducing costs by 40% through responsive design and innovative localization.
- Designed a Multichannel Sales Force Automation tool for Coca-Cola Bottling United, driving 80% business growth in 3 months with robust offline capabilities and scalable architecture.
- Led the creation of the Gems Pervasive Cloud Framework for Ethicon, integrating Drupal, J2EE, and KPLAN REST to optimize product website and LMS deployments.

### 2008 – 2010: SpikeSource Software Inc., Bangalore, India / CA as Solution Experts

- Developed and optimized distributed hybrid cloud environments (IAAS) while managing customer installations and configurations of open-source applications.
- Provided technical leadership by mentoring teams, resolving complex integration issues, and ensuring high-quality software through comprehensive testing and debugging.

## PREVIOUS EXPERIENCE

With extensive experience across IT services, consulting, enterprise mobility, and industrial electronics, I have played key roles in technical strategy, architecture, and software development. At NIIT Technologies, I contributed to IT solutions across India and Germany. At HCL Technologies, I led enterprise solutions in India and Singapore. As a Technical Architect at JP Mobile Inc., I designed mobile solutions for Fortune 1000 businesses. I began as a Programmer at APLAB Limited, developing software for advanced electronics. My expertise spans digital transformation, enterprise mobility, and innovative IT solutions across global markets.

## ACADEMIC CREDENTIALS

- 1<sup>st</sup> Class: Bachelor of Technology in Electronics & Telecommunications Engineering | Calcutta University

## TECHNICAL SKILLS

- Programming with TensorFlow - SkillUp
- Advanced Diploma in Business Management- MTI, Calcutta, India
- Java - EJB Brainbench Certification
- Microsoft Certified Professional in MFC, C++
- Webservices & XML Training – STG (Corporate Training)
- Advanced Diploma In Software Exports – Aptech India
- Segate Info Reporting Training - Seagate Software, Singapore
- Unix & C Programming – Calcutta University, India
- Leading with Vision Certification- PMI
- Serverless Apps with AI Services on AWS - LinkedIn