



Akhilesh Mishra

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Professional Summary

Seasoned Principal Solutions Architect with 12+ years of expertise in designing and implementing enterprise-scale AI and automation solutions across semiconductors, financial services, and consulting domains. Proven track record in architecting generative AI platforms, self-healing automation systems using Agentic AI, and leading cross-functional teams of 39+ professionals. Delivered measurable business outcomes including 20% productivity improvements, 70% MTTR reduction, and 95% SLA maintenance. Expert in multi-cloud architectures (AWS, Azure), DevSecOps practices, and enterprise AI model management systems.

Core Technical Competencies

AI & Machine Learning Architecture: Generative AI solution design, Agentic AI systems, Enterprise AI model management, Multi-model inference systems, MLOps practices, Computer vision (Mediapipe, ResNet CNN)

Cloud & Infrastructure: AWS EKS, Multi-cloud strategy, Infrastructure as Code, DevSecOps (VAPT, SAST), Government Cloud (GCC) implementations

Automation Platforms: Microsoft Power Platform, UiPath AI Fabric, Blue Prism, n8n workflow orchestration, ServiceNow ITSM, Self-healing automation, API design, Microservices architecture

Programming: Python, C#, Java, JavaScript, Django REST APIs, SQL/NoSQL databases, CI/CD pipelines

Professional Experience

Lead Solutions Architect - AI & Automation Practice
Keppel Pte Ltd

June 2024 - Present
Singapore

- Architected enterprise-scale Gen AI development platform on AWS EKS supporting multi-tenant AI workloads with automatic scaling, achieving 99.9% platform uptime
- Designed innovative model manager switch offering seamless access to multiple AI models (GPT, Claude, Llama, custom models), reducing model switching latency by 40%
- Led DevSecOps team of 12 engineers implementing infrastructure-as-code practices for AI/ML development lifecycle with automated security scanning
- Designed and implemented self-healing automation system using Agentic AI integrated with ServiceNow ITSM, enabling autonomous incident resolution and reducing MTTR by 70%
- Spearheaded enterprise workflow automation practice managing Microsoft Power Platform deployment across 500+ users
- Architected AI-powered invoice processing solution using Power Automate Desktop RPA with AI Builder, achieving 85% straight-through processing rate
- Implemented intelligent document processing workflows handling 10,000+ invoices monthly with 95% accuracy rate
- Established Center of Excellence governance framework ensuring compliance and optimal resource utilization

Program Manager - Intelligent Automation
ASM

March 2022 - June 2024
Singapore

- Pioneered Generative AI integration for genetic algorithm-based automation using n8n in-house setup, revolutionizing semiconductor manufacturing process optimization
- Managed intelligent automation practice in semiconductors manufacturing domain with focus on K2 (Nintex), Microsoft Power Platform, and Adonis technologies
- Led agile team of 39 professionals using Agile methodologies, maintaining 95% SLA for incident resolution and service requests
- Established COE governance and controls using Power Platform starter kit

- Achieved organization-wide automation adoption rate of 40% through strategic change management initiatives, leading to 20% increase in productivity
- Designed solutions to implement Microsoft AI Builder and AI Center capabilities with RPA platforms
- Designed solutions to track Video Actions and provide comparison scores using Python CV libraries (Mediapipe, ResNet CNN)
- Supervised Vulnerability Assessment and Penetration Testing (VAPT) and Static Application Security Testing (SAST) for RPA infrastructure
- Set up UiPath Orchestrator on-premise on private cloud (GCC) and designed infrastructure for Government Cloud on AWS

Senior Consultant - Intelligent Automation
Protiviti

January 2021 - March 2022
Singapore

- Led Python, Kofax, and UiPath support teams in intelligent automation implementing Agile methodologies
- Conducted daily stand-up calls to track progress and ensure timely delivery of sprint MVPs
- Conducted monthly CSAT and team temperature evaluations to foster positive team culture
- Developed proof of concepts (POCs) for multiple RFPs in intelligent automation domain
- ASAHI Audit Forensics: Designed and implemented Python-based email filtering algorithms for enhanced audit process security
- Galileo Fraud Detection: Utilized Celonis EMS and Studio with Python to identify fraud patterns, resulting in significant cost savings
- Designed user-friendly RPA tool using Selenium WebDriver and Python enabling non-technical users to automate processes
- Implemented integrated solution for digitizing fact sheets using Kofax KTA and C# programming
- Designed UiPath AI Fabric solution for intelligent task automation within the UiPath platform

Principal Consultant - Automation Solutions
Shell Infotech

February 2019 - December 2019
Singapore

- Developed proof of concepts (POCs) for multiple Requests for Proposals (RFPs) in intelligent automation domain
- ASAHI Audit Forensics: Designed solution to filter suspicious emails from multiple stakeholders' .Pst files using Python automation and data analysis capabilities
- Galileo Fraud Detection: Analyzed over million transactions in procurement process using Celonis EMS and Studio with Python analytical capabilities
- Designed user-friendly RPA tool using open-source technologies Selenium WebDriver and Python with intuitive graphical user interface
- Designed and implemented integrated solution that digitized fact sheets through custom C# desktop application using Kofax KTA
- Designed UiPath AI Fabric solution to integrate with Attended Bots, enabling AI capabilities within UiPath platform for intelligent tasks
- Led team of 8 as Robotic Process Automation Lead, organizing sprints for efficient work allocation
- Designed robust automation framework using Python and Django for server-side scripting and REST API development
- Oversaw migration from Blue Prism version 5 to 6.4 ensuring seamless transition and minimal disruption
- Integrated IBM Bluemix Natural Language Understanding (NLU) services with Blue Prism leveraging Watson capabilities

Information Technology Consultant
Deloitte

January 2018 - February 2019
India

- Prepared Process Design Documents (PDD), Technical Design Documents (TDD), and Bot Design Documents (BDD)
- Prepared business case slides for bots, effort estimations, and design diagrams
- Prepared infrastructure for Nuance (OCR) and test cases for SIT and UAT
- Built, tested, and deployed automation solutions, performing UAT with business users
- CLS Settlements: Designed automated reconciliation process for real-time trade settlements using Blue Prism
- Daily Security Reports Extraction: Automated archive security reports data post-download and transformation
- Bulk Mail Dissemination: Designed automated solution for department-wise bulk email distribution
- Share Class Data Synchronization: Automated synchronization between ICE App and Fund Info website using Blue Prism

and iTextSharp (C#)

- AIP SupplyChain: Designed audit invoice pull process using UiPath for web and desktop applications

Automation Engineer
EY

October 2016 - January 2018
India

- Assessed processes for automation using High Level Technical Assessment (HLTA)
- Prepared Technical Assessment Documentation (TAD), Technical Design Documents (TDD), and Bot Design Documents (BDD)
- Prepared business case slides for bots, effort estimations, and design diagrams
- Supervised build, test, and deployment processes for automation solutions
- Successfully delivered tax delivery processes automation across EMIA, Americas, and APAC regions
- Implemented TQ Review and Robotics Workflow for Automation (RWF) solutions
- Utilized Blue Prism, UiPath, C#, VBA, and MS Visio for solution development

Software Engineer
LTI

October 2014 - October 2016
India

- Built software modules as per user stories, conducted unit testing, and supervised UAT and deployments
- Trained teams for RPA development in Blue Prism and Kofax Capture/KTM, prepared assessments
- Banking Client Projects: Developed financial backbone portal and automated testing processes
- Implemented banking client's KYC process automation and insurance client's rule engine automation
- Utilized Blue Prism, C#, VBA, Kofax, Java, and Selenium WebDriver for development

Freelance Full Stack Developer
Independent Contractor

March 2012 - October 2014
India

- Developed custom desktop application using VB script for medical professionals to precisely define cases of Ano Rectal abnormalities
- Built MVC cloud application for inventory management featuring Angular JS frontend and C# backend with SQL Server database
- Created multiple CMS portals and websites using WordPress and PHP for various clients across different industries
- Provided end-to-end development services including requirements analysis, system design, development, and deployment
- Managed client relationships and project timelines while delivering high-quality software solutions independently

Education

Bachelor of Technology - Computer Science and Engineering
Rajasthan Technical University

India

Professional Certifications

AWS Certified Generative AI Developer - Professional Early Adopter • AWS Certified Solutions Architect – Professional • Microsoft Certified: Azure AI Engineer Associate • UiPath RPA Developer Advanced Certification •

Key Achievements & Metrics

Business Impact: 40% automation adoption rate • 20% productivity improvement • 95% SLA maintenance • 70% MTTR reduction • 60% reduction in manual processing

Technical Leadership: Led teams up to 39 professionals • Managed \$2M+ automation programs • 10,000+ monthly transactions processed • 99.9% platform uptime

Innovation: Pioneered Gen AI manufacturing integration • Multi-model AI management systems • DevSecOps AI/ML practices • 50% delivery time reduction through accelerators

Technical Proficiencies

Cloud Platforms: AWS (EKS, EC2, S3, Lambda), Microsoft Azure, Google Cloud Platform

AI/ML Frameworks: TensorFlow, PyTorch, Scikit-learn, Hugging Face Transformers

RPA Platforms: UiPath (AI Fabric), Blue Prism, Microsoft Power Platform, n8n, ServiceNow ITSM

Programming: Python, C#, Java, JavaScript, SQL, VBA

DevOps Tools: Docker, Kubernetes, GitHub CI/CD, Terraform