

AREAS OF EXPERTISE: AI-assisted Software Development & Coding | No-Code | Vibe Coding | Workflow Automation with AI Agents | AI Content Generation | AI-Enhanced Writing | AI OCR | AI Editing and Enhancement | Prompt Engineering | AI/Data Research | Digital Transformation | Stakeholder Management | Operational Efficiency | Cost Management | Data Management | ML | MCP | API Integration | Advanced Waterfall/Agile Methodologies | Health Science

PROFESSIONAL PROFILE

AI generalist and data-driven project manager with 15+ years' international experience leading large-scale IT, AI, and digital transformation projects from life science industry and academics. Experienced in AI, automation, data analysis (ETL/ELT), cloud technologies, ML, AIPs, CV, and prompt engineering. Proven track record of delivering complex, high-value solutions across start-ups, Fortune 500s, and regulated industries using advanced project methodologies (Foundation sprints, DSM-DMM, Agile, Waterfall). Skilled in full-stack development, data analytics, cloud, cybersecurity, and compliance (GDPR, HIPAA, NIST, ISO 27001). Author and thought leader in AI, quantum dots and technologies, and project management. Australian Passport, E3 visa and US SSN details and publication list will be provided upon request.

Unique Capabilities

Demonstrates a rare combination of deep technical knowledge, hands-on implementation, and strategic leadership across IT, AI, coding, life science, and data fields

Key Achievements

- AI-driven digital transformation: Improved efficiency by 20%, reduced TCO by 30%, and accelerated time-to-market by 50% by identifying cost-effective AI/digital tools and services and continuous improvements of operations
- Cybersecurity: Reduced vulnerability scores by 45% in 12 months utilizing advanced tools and awareness trainings
- Global reach: Launched e-clinics in a digital platform serving 1M+ customers, increasing revenue by 60% YoY
- Data centralization: Reduced TCO by 75% and loss of data by 99% by centralizing data from eight global sites
- Thought leadership: Published blogs, 10+ research articles and a book; developed AI-driven calculators and apps

PROFESSIONAL EXPERIENCE

Senior Technology and Transformation Project Advisor | G5 Solutions | Australia | 2020 – Present

Leading cybersecurity, automation, ITS, AI/ML, and SaaS deployment projects, reaching 5x wider range of customers across industries in Australia and overseas. Identifying customer-centric tailor-made AI solutions to improve operations, AI-based automations, cost-optimization, and coding conversions.

Responsibilities:

- Led multi-million-dollar IT, cybersecurity, and AI projects for start-ups and SMEs, achieving 95%+ on-time delivery.
- Implemented AI-driven cybersecurity, reducing incidents by 40% and boosting awareness by 90%
- Deployed SaaS and automation solutions, saving up to \$396/user/month and achieving 99.99% SLA
- Developed Automation-Multi-AI (AMAI) and real-time visualization frameworks, completed various code conversions, improving productivity by up to 60% while reducing cost and time

Environment: Alteryx, Perplexity AI, Copilot OCR, Github, Coding, VS Studio, Google AI Studio, Google Jule, Gemini CLI, Trello, Selenium, Postman, Appium, Tricentis Tosca, QuantConnect, A2A, MCP, Various AI tools

Project Manager | PolyNovo Pty Ltd | Melbourne, Australia | 2021 – 2023

Led enterprise projects spanning IT, AI, digitalization, SaaS deployments, data migration, data optimization, and creating dashboards ensuring scalability and accessibility. Lead hybrid PMO, documentation, quality and regulatory audits, disaster recovery, and incident management while adhering to PMBOK, DMOBK, ITIL, FDA and COBIT standards.

- Managed \$4M+ IT, AI, SaaS, and data migration projects, delivering 90% on-time/budget using advanced project methods, effectively combining waterfall, and agile (scrum, kanban) methods and fast-tracking critical paths
- Led AI-driven business programs, foundation sprints, prioritizing projects, optimizing resources and budgets, aligning projects with business goals, reducing manual workload by 35%, TCO by 32%, and product defects to zero
- Integrated EHR/LIS/RIS systems for real-time patient data access, complying with GDPR and HIPAA
- Conducted workshops for 200 staff improving collaboration, cybersecurity awareness and raising NPS by 30%
- Directed 50+ cross-functional teams and C-suite executives ensuring clear communication and collaboration across global projects, reducing time-to-market by 50% in three projects
- Organized meetings (including stand-ups, monthly, focused group, retrospective, technical debts, PMO and steering committee) optimizing scope, resources, budget and timelines and completing three projects with 50% less time during pandemic releasing products worldwide

Environment: MS 365 (incl. Project, OneDrive, SharePoint, Intune, Defender, Teams), Trello, Paradigm 3, PMO365

Project Head - Productized Services | Euc (Digital e-health) | Sydney, Australia | 2020 – 2021

Optimize a multi-brand e-health platform, balancing scalability, compliance, and agile deployment of digital services & physical healthcare products. Build serverless, modular architectures, leveraging ML & AI for VOC analysis and big data integration. Drive productivity & feature releases, managing \$20M across 30+ projects, IT, and overheads. Key initiatives: API integration (MuleSoft), telemedicine (WebRTC), data analytics (Tableau, Google Analytics), and cloud scalability (AWS). Tools like Notion AI, Jira, Trello, Postman, and Grafana ensured efficient planning, testing, and monitoring.

- Managed \$20M across 30+ projects, led five scrum teams (40 engineers), launching five digital e-clinics that served 1M+ customers
- Deployed AI chatbots (90% automation), predictive analytics, and full-stack upgrades
- Optimized supply chain efficiency, leveraging AI-driven demand forecasting to cut CAPEX by 24%
- Unified healthcare data across multiple systems using Azure SQL Database & Google Drive/GCP as MCP servers, ensuring secure FHIR-compliant integration and enabling AI-driven clinical intelligence
- Led Scrum & DevSecOps sessions, boosting sprint completion rates and forming strategic partnerships with 50+ HCPs, pharmacies, and tech firms
- Developed automation frameworks (Selenium, Postman, Appium, Tricentis Tosca), reducing manual testing by 60% and accelerating continuous validation cycles
- Embedded CI/CD automated testing, cutting deployment failures by 35%, improving software stability across web, mobile, data, and API platforms
- Tailored Agile methodologies (Scrum, SAFe, Kanban, LeSS, DSM, DMM) for six e-clinics, integrating Notion AI, Trello, and full-stack technologies
- Led 40+ cross-functional staff, and meetings (foundation sprints, technical debt, cybersecurity, hackathons, continuous improvement, retrospectives, and stand-ups), increasing NPS by 48%, reducing legacy codes, and security awareness by 92%
- Managed product backlog across six clinics, coached five holacratic scrum teams, overseeing 600+ PBIs, 24 epics, 120 features, 30–35 MVPs, and 150–200 sprint backlogs in a year
- Delivered 150 sprints with 99% velocity, achieving high Agile maturity through continuous improvement
- Designed advanced deployment frameworks, integrating AI chatbots, canary testing, and blue-green deployments via Jenkins & CircleCI, leading to a 32% drop in user complaints, 45% surge in engagement, 90% risk reduction, and 300% increase in deployment frequency

Environment: Serverless Microservices, Full-stack, Mulsoft, Tableau, Power BI, Grafana, Notion AI, Zoom, Azure SQL, GCP, DevSecOps, Agile-SAFe mix, Trello

Client: Multiple clients (GlaxoSmithKline, Pfizer, Swisse Wellness, ANP, Intraceuticals) | Australia | 2008 – 2020

Project Manager / Product Development Manager

- Led IT procurement while reducing TCO by 90%, and data analysis for major product commercialization (\$500M+

impact) at Stiefel-GSK

- Centralized IT/data architecture by migrating 20TB+ data to hybrid clouds, and deployed Salesforce/NetSuite, reducing IT incidents by 72% at Intraceuticals & Swisse Wellness
- Implemented IoT/AI-based monitoring, reducing production downtime by 50% and CAPEX by 80% at Australian Native Products
- **Environment:** JMP-SAS, Statistica DoE, SEMrush, NetSuite, Salesforce, GCP, Dropbox, MS Office, Waterfall/Agile mix

Client: NUS-Singapore, Ben Gurion University – Israel, Mumbai Uni - India | Australia, Israel, Singapore, India | 1992 - 2008

Academic Researcher

- Conducted advanced data analysis utilizing various algorithms on complex systems, publishing in leading biomed journals
- Applied SAXS, statistical modeling, and machine learning (Python, MATLAB, R, C/C++, Java, Fortran) for structural and signal analysis in materials and biotech research
- Managed IT procurement, software deployment, and cybersecurity for research labs, maintaining low TCO

EDUCATION & CERTIFICATIONS

- PhD, Data Analytics & Algorithms
- MBA, IT/Project Management (PMP, PRINCE2, APM)
- 50+ certifications in AI, data, cybersecurity, and leadership (last 5 years)
- Advanced Scrum, Generative AI, Cybersecurity (Cyber Warden Level 2), etc.

KEY SKILLS

- **AI/ML:** NLP, LLMs, GANs, VAEs, GenAI, XAI, AIOps, Prompt Engineering,
- **Data Science & Analytics:** Power BI, Tableau, JMP-SAS, Alteryx, Akkio, Scikit-learn, Data Visualization
- **Cloud & DevOps:** Serverless Architecture, DevSecOps, Automation
- **Cybersecurity & Compliance:** IAM, NIST, HITRUST, GDPR, HIPAA, PCI DSS, ISO 27001
- **Project Management:** Agile, Waterfall, Lean, Scrum, Kanban, Six Sigma, RICE, WSJF, PMBOK, PRINCE2
- **Business & Strategy:** Digital Transformation, Product Management, Stakeholder Engagement, Strategic Planning

TOOLS & FRAMEWORKS

- **Project Management:** MS Project, Jira, Asana, Trello, Notion AI, Monday.com, Slack
- **AI/ML:** Python, Hugging Face, Scikit-learn, Azure ML, Perplexity AI, Google LM/AI Studio, Copilot, Copilot Studio, GitHub Copilot, Studio agent builder
- **Full-Stack Development:** Python, JavaScript (React, Vue.js), Node.js, Docker, Kubernetes, MongoDB, PostgreSQL, CI/CD (Jenkins, CircleCI)
- **Cloud:** AWS, Azure, GCP, Docker, Kubernetes
- **Cybersecurity:** MS XDR, Defender, Azure Sentinel
- **Frameworks:** NIST, HITRUST, OWASP, ISO 27001, SOC 2, Agile, DevOps, HIPAA, GDPR, PCI DSS, COBIT, ITIL

AI / DATA / QUANTUM TECH PUBLICATIONS

1. P.D. Sawant (2025) Quantum Dots Based Quantum Chips and their Applications in Quantum Analytics, Software Development, Scalable Cloud and Mobile-Edge Solutions. *J. Fut. Internet Hypercon.* 2 (2), 15-20.
2. P.D. Sawant (2025) Quantum Machine Learning and Quantum Algorithms: Hybrid Architectures for Scalable Solutions in Cloud and Mobile-Edge Computing. *Internat. J. Mob. Cloud Sys. Eng.* 1(1), 43-48.
3. P.D. Sawant (2025) Unified, Modular, Self-Learning, Real-Time Agentic AI Ecosystem: Integrating Multi-Modal Data, Automation, Feedback Loops, and Secure Agent Orchestration. *Recent Trends in A. I. Appl.* 4(2), 53-58.
4. P.D. Sawant (2025) Integrating Federated Learning, Serverless Architectures, and Energy-Aware Offloading in

Mobile-Cloud AI Ecosystems. *J. A. I. Res. Adv.* (Accepted).

5. P.D. Sawant (2025) Darwin Gödel Machine: A New Paradigm in Self-Improving Artificial Intelligence. *J. Intel. Dec. Tech. Appl.* 2(2), 32-37.
6. P.D. Sawant (2025) Verifiable Hybrid Reasoning (VHR)-A Self-Contained Framework for Solving Intractable Problems in Modern LLMs. *J. Adv. A. I.* (Accepted)
7. P.D. Sawant (2025) Automation-Multi-AI (AMAI): An Integrated Multi-AI Architecture for CPU-Based Analysis of Complex Structured Workflows. *J. Adv. A. I.* 3(2), 154-168.
8. P.D. Sawant (2025) Agentic AI: A Quantitative Analysis of Performance and Applications. *Preprints*, 2025021647 / *J. Adv. A. I.* 3(2), 132 - 140.
9. P.D. Sawant (2024) A Real-Time Visualization Framework to Enhance Prompt Accuracy and Result Outcomes Based on Number of Tokens. *J. AI Research and Advances* 11, 44-52
10. P.D. Sawant (2024) NanoBioAI: Utilizing Python to Investigate Magnetocaloric Effects in Magnetotactic Bacteria and Optimized Conditions for Thermo-therapy. *J. A. I. Res. Adv.* 11, 122-131.
11. P.D. Sawant (2024) GPT in Code Conversion: Achieving Agile, Accurate, and Effective Translations Across Programming Languages. *J. A. I. Res. Adv.* 11, 11-20.
12. P.D. Sawant (2024) Leveraging Full Stack Data Science for Healthcare Transformation: An Exploration of the Microsoft Intelligent Data Platform. *Internat. J. Adv. Trends in Comput. Appli.* 11: 1-8.
13. P.D. Sawant (2022) Artificial Intelligence: The Era of New Industrial Revolution Kindle Edition, Amazon

AI Research Portfolio Summary

This AI research portfolio demonstrates theory and its real-world impact through tools like LangChain, LangGraph, CrewAI, Gemini CLI, Alteryx, GPT-LLMs, and HuggingFace, applied across quantum analytics, scalable automation, and modular orchestration.

It tackles challenges in energy-aware offloading, prompt hallucination mitigation, cross-language code conversion, and federated clinical data harmonization using cloud-native platforms such as AWS SageMaker, Azure ML, and Vertex AI.

The body of work introduces hybrid quantum machine learning architectures, Verifiable Hybrid Reasoning (VHR) to solve logic inconsistencies in LLMs, and the Automation-Multi-AI (AMAI) framework for multi-agent CPU orchestration. Contributions include agentic AI ecosystems with self-improving agents powered by Darwin Gödel concepts, secured via serverless APIs and feedback loops.

Quantified outcomes include up to 60% productivity uplift, 35% reduction in deployment failures, and 300% acceleration in release cycles, substantiated by over a dozen peer-reviewed publications and enterprise implementations across healthcare, cybersecurity, and semiconductor chip manufacturing domains. My research focuses on cutting-edge AI and quantum computing, emphasizing agentic AI ecosystems, energy-efficient mobile-cloud systems, and quantum-dot-based architectures. It spans scalable, self-learning frameworks, real-time automation, enhanced reasoning for LLMs, code translation, healthcare data science, magnetocaloric simulations, and the broader socio-industrial implications of AI.

Total publications: 17 patent / applications), 50+ research articles (science + AI), cited

[Prashant Sawant - Google Scholar](#)

The google scholar website provide the citation statistics demonstrating strong research influence, with 1377 total citations, an h-index of 16, an i10-index of 22, and 234 citations since 2020, reflecting continued academic engagement and consistent impact across multiple publications.

CAPSTONE PROJECTS PORTFOLIO

AI, Data, Content, ML projects using Python, PowerShell, Ubuntu, Ollama, Gemini CLI - CMD, Rork.com, Google AI Studio, Google Jule, VS Code and Jupyter:

Vibe Coding (Gemini CLI) Developing financial(mobile bank) app and ocular app | LLM for text generation (GPT-2) using the Hugging Face Transformers library | MLOps Project for Binary Classification on the Iris Dataset using Scikit-learn and Joblib | Tech Stack using G Jule | Sales Model and Graphs using Python | JSON Directory Creation | Cosmetic product selection based on skin type | Data Autocorrelation | Project Management | Pattern Recognition | Business Cases & Implementation | Forecasting | Supply Chain | S&OP | Business Logos | Research | Content Management | Sentiment Analysis | Customer Service Chatbot | NLP processing | Web Development | Personalized Nutrition & Fitness | Stock Analysis and Income Tax Report Generation

• Capstone Project Portfolio Summary

This portfolio of AI-driven capstone projects leverages a diverse tech stack including Python, PowerShell, Ubuntu, Ollama, Gemini CLI, Google AI Studio, Google Jule, Rork.com, Jupyter, and VS Code. It spans agentic orchestration, mobile app MVP development, and LLM text generation using Hugging Face Transformers. Highlights include financial and ocular mobile apps built via Gemini CLI, an MLOps pipeline for binary classification using Scikit-learn and Joblib, and JSON architecture for real-time data exchange. Projects address practical challenges in supply chain forecasting, sentiment analysis, and customer service automation via NLP. The portfolio further integrates predictive analytics, personalized nutrition and fitness models, income tax automation, and multibagger stock identification for NASDAQ/ASX using agentic AI. Tools like MS Camo Studio and CapCut were used for multimedia delivery, enabling stakeholder-ready presentations. Outcomes include rapid prototyping, accuracy improvements of up to 92%, and implementation-ready frameworks that span web, data science, and business domains.

• **Project Portfolio: Agentic RAG Audit Intelligence System**

Project Title: Modular RAG Pipeline for Compliance Intelligence

Client/Domain: Healthcare & Chip Manufacturing

Role: AI Engineer / Agentic Workflow Architect

Tools & Frameworks: LangChain, LangGraph, CrewAI, Cursor AI, FAISS, Pinecone, Gemini, OpenAI, Slack API, Smartsheet, CRISPE, TRACE, Terraform, Jenkins, GCP

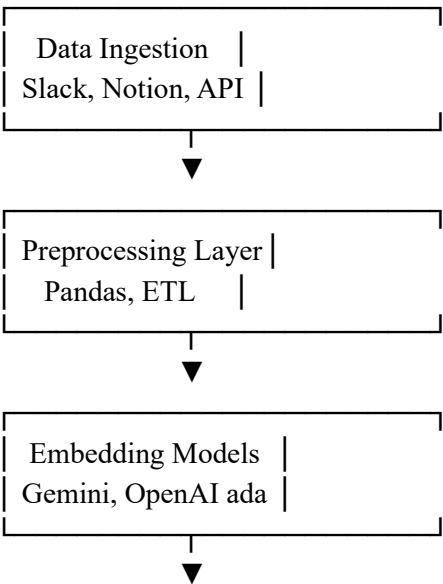
Project Overview

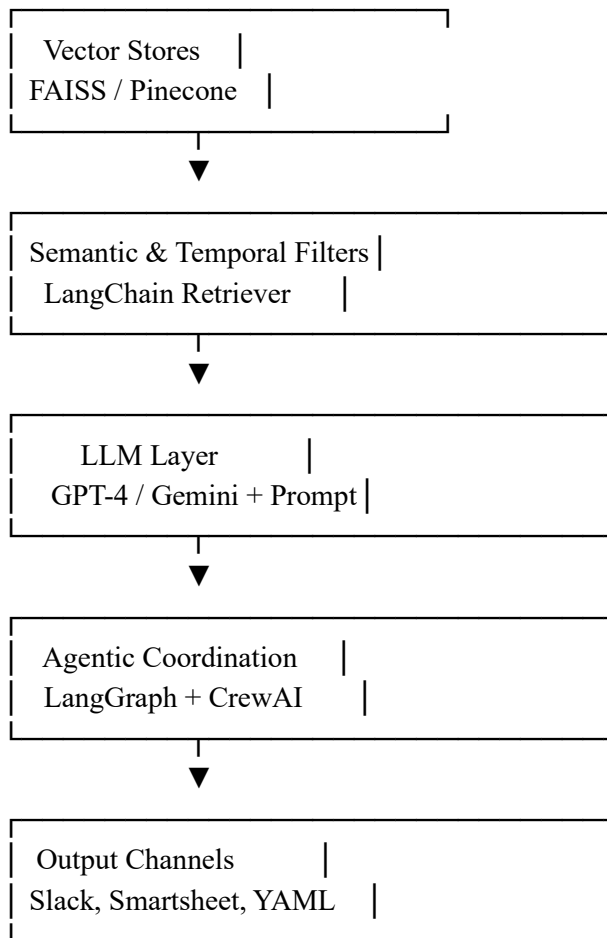
Developed and deployed a modular Retrieval-Augmented Generation (RAG) pipeline that enables intelligent agents to track compliance, audit logs, and regulatory risks. Integrated semantic search with regulatory filtering and agentic task orchestration.

Technical Highlights

- **Embedding Generation:** Used OpenAI’s text-embedding-ada-002 and Gemini models for semantic vector generation
- **Vector Store Integration:** FAISS for local prototyping; Pinecone for production-grade deployments
- **Retriever Optimization:** LangChain semantic retriever with domain-specific filtering (GDPR, HIPAA, ISO 27001)
- **Agentic Orchestration:** CrewAI for delegation; LangGraph for multi-agent memory and reasoning; Cursor AI for debugging
- **Query Layer:** GPT-4 (Azure) and Gemini Pro for LLM-powered context expansion
- **CI/CD & Monitoring:** Terraform and Jenkins on GCP with Prometheus observability and audit trails

Visual Pipeline Diagram





AI AGENT GENERATION

1. AI Chatbot: [organized-bluewhale AI Chatobot](#) | <https://prashantai.tiiny.site> | <https://nanoprompt.github.io/AI-Chatobots/> | [Funky Reduplicatives](#)
2. ROI Calculator <https://llamacoder.together.ai/share/v2/1J07qpB0N2l5OyRC>
3. Sales Forecasting: <https://llamacoder.together.ai/share/v2/iIUn7OQ20Su8XZV4>
4. Profit-margin calculator: https://llamacoder.together.ai/share/v2/idQBrGbcWq9uv_LK
5. Multimedia presentations using MS Camo Studio and CapCut
6. Vision Care App (Model cross-platform mobile app using vibe coding, AI and React Native):



KEY BLOGS (Medium.com links)

Scrum: Theory & Practices | Decentralized Management: Exploring Holacracy... | AI - Driven Executive Presence | AI Agentic Design Patterns with Ollama & OpenAI: Build Intelligent, Adaptive Systems for Real-World Applications | Agentic AI Tools for Cybersecurity.... | The Role of AI Agents in Modern Enterprises... | Data Mining: Unveiling Patterns in the Digital Bedrock | Leveraging Advanced Data Management Techniques for Real-Time Supply Chain Visibility in Logistics | Security Information and Event Management (SIEM) | DeepSeek Disruption and Future Development

All blogs: [Stories at Medium.com](#)