

Ahmed B. Darwish

AI Product and Innovation Lead | Applied AI Solutions | Telecom Automation

AI product and innovation leader with 16+ years in telecommunications, combining deep domain knowledge with hands-on delivery across multi-agent systems, agentic RAG, automation, computer vision, and AI-enabled product development. I focus on real business problems, shape product direction around them, and drive working systems into production with measurable impact. My experience spans product strategy, AI solution architecture, cross-functional execution, and telecom transformation programs, with a consistent focus on turning complex operational challenges into scalable products, smarter workflows, stronger decision-making, and measurable business results.

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Selected Impact

- 16+ years across telecom, optimization, analytics, and innovation
- ~80% faster troubleshooting and root-cause analysis
- 9,600 annual hours saved through AI Maestro business impact
- 3 granted USPTO patents across telecom and emerging technologies

Executive Focus

- Translate business problems into practical AI product direction and delivery plans.
- Build applied AI systems that move from proof of concept to operational use.
- Combine telecom depth with AI engineering to improve automation, analytics, and decision-making.
- Lead cross-functional work across product, engineering, innovation, and business stakeholders.

Core Capabilities

AI Product Vision & Roadmap

Applied AI Delivery

Telecom Automation

OpenRAN

Multi-Agent Systems

LangGraph / CrewAI / AutoGen

RAG & Knowledge Systems

Computer Vision with YOLO

Python & FastAPI

Cross-Functional Leadership

Product Strategy & Market Alignment

AI Patent & Innovation Support

Network Performance Analytics

Professional Experience

AI and Innovation Lead for E2E Performance and Capacity
Rakuten Mobile · Tokyo, Japan

Oct 2024 - Present

- Lead development of AI Maestro and related AI products for autonomous data analysis, visualization, and network performance optimization.
- Architect scalable AI solutions with LangGraph and integrate them with internal enterprise AI ecosystems.
- Built an agentic RAG system for technical manuals to improve information retrieval and operational efficiency.
- Contribute to innovation and IP creation through AI-focused patent activity in telecom applications.
- Mentor engineering teams on production-ready AI practices, delivery quality, and robust system design.

AI and Innovation Lead for Site Management
Rakuten Symphony · Tokyo, Japan

Aug 2023 - Oct 2024

- Led AI use-case discovery, proofs of concept, and demos for the mobility product line.
- Designed and developed AI features that supported end-to-end automation workflows.
- Helped advance zero-touch mobile network ambitions through applied AI and ML initiatives.
- Aligned AI features with broader product strategy through close cross-functional collaboration.
- Contributed across product thinking, execution, and technical solution design.

Senior Director, Sympulse Application Section

Rakuten Symphony · Tokyo, Japan

Jan 2023 - Aug 2023

- Developed product strategy aligned with company vision and market opportunities.
- Led market analysis, product innovation, and roadmap development.

Product Owner - Scrum Framework

Rakuten Symphony · Tokyo, Japan

Jun 2022 - Dec 2022

- Defined product vision, mission, and roadmap while managing stakeholder alignment.
- Owned backlogs, user stories, and delivery priorities to support high-quality product releases.
- Tracked market opportunities, technology trends, and innovation opportunities to keep products competitive.
- Worked with legal teams on patent-related risk review and innovation protection.

Earlier Telecommunications Roles

Huawei · Nokia · Al-Osais · ICT

Sep 2007 - Jun 2022

- **CEM Expert**, Huawei, Riyadh: performance analytics, KQIs/KPIs, Ookla analysis, device insights, and event-focused reporting.
- **Pre-Launch Optimization Engineer**, Nokia, Riyadh: mobile network optimization and pre-launch readiness.
- **Telecom Field Engineer Team Lead**, Al-Osais, Dammam: telecom field execution and team leadership.
- **Radio Drive Test Engineer**, ICT, Cairo: field analysis and mobile network measurement foundation.

Selected Projects

- **Telora**: private, personal AI agent for telecom research, visual learning, discovery, research writing and patent drafts.
- **Pulse**: open-source hub for people and AI agents, connecting projects, notes, todos, reminders and memory through MCP.
- **BM Agent**: benchmarking AI agent harness for radio log file analysis at Rakuten Mobile.
- **AI Maestro**: multi-agent AI system for KPI analysis, visualization, and telecom performance workflows.
- **Advanced SQL AI Agent**: LangGraph-based agent for enterprise data access and structured insight generation.
- **Technical Manuals RAG**: agentic document retrieval for internal knowledge access and faster operations.
- **YOLOv10 Site Manager Detection**: computer vision workflows for site operations and safety monitoring.
- **EasyOokla**: desktop application for automated speed-test analysis and reporting.
- **Multi-Agent Telecom Automation Concepts**: work spanning CrewAI, AutoGen, and privacy-conscious AI system design.

Patents and Applications

- **US 12,308,894 B2**: System, method, and medium for blockchain-enabled microwave antennas.
- **US 12,328,299 B2**: System and non-transitory computer-readable medium for an internet-enabled network radio node.
- **US 12,587,873 B2**: System, method, and medium for network drive testing via self-driving vehicle.
- Additional AI and telecom patent applications remain part of ongoing innovation work.

Education, Skills, and Languages

Bachelor's degree in Electrical and Computer Engineering

Higher Technological Institute, Egypt
Graduated 2007

Technical stack: Generative AI, Python, SQL, Power BI, LangGraph, RAG, computer vision, automation

Interests: AI/ML, blockchain, 5G, Open RAN, cloud, NB-IoT, Kubernetes

Languages: English (fluent), Arabic (native)

Awards and Recognition

- Passionately Professional Award - Rakuten Mobile CEO
- Rakuten Mobile Innovation Award
- 2nd Place R-Pitch Program - ZenSpace AI
- Certificate of Achievement for IP Excellence
- IBM Data Science Professional Certificate