

## CURRICULUM VITAE

# 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

- **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