

BAKR MOSTAFA BAKR

FORWARD DEPLOYED AI / APPLIED AI ENGINEER

Cairo, Egypt | bakrmostafa.com | linkedin.com/in/bakr-mostafa-ai

PROFESSIONAL SUMMARY

Senior Software Development Engineer at GB Corp with 18+ years across enterprise technology, operations and software delivery, now focused on forward-deployed and applied-AI engineering. I turn incomplete business requirements into production systems - from discovery and architecture through Python/Django implementation, enterprise integration, AI-assisted workflows, deployment and production support. My differentiator is operating across business context, software engineering and AI rather than treating the model as the whole product.

CORE CAPABILITIES

Python / Django | PostgreSQL / SQL | REST APIs / Integrations | Docker / Linux | AI Agents / LLM Integration | MCP / Tool Interfaces | RAG / Retrieval | Workflow Automation / n8n | Solution Architecture | Production Troubleshooting | RBAC / Secure Delivery | Stakeholder Discovery

PROFESSIONAL EXPERIENCE

Senior Software Development Engineer | GB Corp | Feb 2024 - Present

Cairo, Egypt

- Translate ambiguous business and operational requirements into deployable software systems; own work from discovery and architecture through implementation, testing, deployment and production troubleshooting.
- Build full-stack enterprise applications with Python, Django, PostgreSQL and JavaScript, including role-based, multilingual and workflow-driven experiences for non-technical users.
- Design integrations across enterprise systems, REST APIs, databases and automation workflows, and apply AI/agent components where they create practical operational value.
- Use AI-assisted engineering tools to accelerate implementation and investigation while retaining ownership of architecture, validation, security, testing and final technical decisions.
- Contribute to technical architecture, delivery standards and mentoring while supporting production issues and iterative improvement from real user feedback.

IT Support Engineer Team Leader | GB Corp | Jun 2015 - Feb 2024

Cairo, Egypt

- Led enterprise support and operational troubleshooting across business users, endpoints, infrastructure and production technology, building a strong understanding of real operational constraints and incident response.
- Coordinated technical support work, user communication and escalation across complex enterprise environments; developed the stakeholder and delivery discipline that now informs software and AI implementation.

Technical Consultant | FIXITechnology | Jun 2014 - Jun 2015

Cairo, Egypt

- Delivered hands-on technical consulting, maintenance and support for customer technology environments, diagnosing issues and translating user needs into practical technical actions.

Physical Security Manager | Security and Network Services (SNS) | Jan 2008 - Dec 2012

Cairo, Egypt

- Managed technology spanning Windows/server environments, Active Directory, backup tooling, technical support, CCTV/access control and ISO 27001 documentation, combining infrastructure, security and operational responsibility.

SELECTED ENGINEERING EVIDENCE

Enterprise AI Orchestration & Automation | Python, Django, MCP, APIs, Docker

- Designed the control boundary between AI reasoning and deterministic execution: structured intent, policy/validation, bounded tool interfaces and auditability rather than unrestricted model actions.
- Produced a reusable architecture that keeps model/provider changes decoupled from business rules and tool execution while preserving permissions, traceability and failure containment.

Case study: www.bakrmostafa.com/case/enterprise-ai-orchestration/

Enterprise Workflow Platform Engineering | Django, PostgreSQL, REST APIs, RBAC, PWA

- Translate loosely defined operations into actors, states, permissions, records and integrations, keeping front-end journeys simple while complexity is enforced through tested server-side rules.
- Turn fragmented/manual workflows into explicit ownership, status and audit trails, creating a maintainable base for future operational change without exposing private customer data.

Case study: www.bakrmostafa.com/case/enterprise-workflow-platform/

Production Django Systems | Python, Django, PostgreSQL, Docker, Railway, Security

- Own the delivery surface across backend logic, database rules, responsive interfaces, integrations, containerization, deployment and production troubleshooting.
- Use explicit validation, permission boundaries, health checks, secure deployment and post-release verification to catch production failures before handoff and shorten diagnosis when incidents occur.

Case study: www.bakrmostafa.com/case/production-django-systems/

APPLIED AI & ENGINEERING STACK

Applied AI: LLM integration, AI agents, MCP, tool calling, RAG/retrieval, structured outputs, prompt engineering, workflow automation, human approval boundaries, evaluation-minded delivery.

Software & Platform: Python, Django, PostgreSQL, SQL, REST APIs, JavaScript, HTML/CSS, Docker, Linux, Git/GitHub, Railway, PWA, n8n, production logging and health checks.

Delivery: Requirements discovery, solution architecture, workflow/domain modelling, integrations, secure deployment, troubleshooting, stakeholder communication and iterative production support.

ADDITIONAL EVIDENCE

- Efficient Local AI Runtime R&D - numbered experiments and blind validation exploring lower-overhead local AI on consumer NVIDIA hardware; public claims intentionally separate measured results from hypotheses.
- Secure Django Portfolio - this live site is itself inspectable production evidence: persistent PostgreSQL, restrictive CSP/HSTS, rate-limited contact, health checks, public structured data/APIs and 23 automated tests.

EDUCATION

Modern Academy for Engineering and Technology, Cairo, Egypt | Engineering education