

Ahmed E. Elshafey

FULL STACK SOFTWARE ENGINEER

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Summary

I'm a full-stack engineer with 5+ years experience developing cloud solutions in organizations like **Microsoft**, **Dell** and **Capgemini**. I have a strong background in full-stack development, cloud infrastructure, and DevOps. Published researcher with **4 patent filings** with USPTO. Passionate about Agile, DevXP, and continuous improvement. I focus on a mix of technical experience and business knowledge with an **MBA in progress** to strengthen my business and leadership skills.

Education

Master of Business Administration

THE AMERICAN UNIVERSITY IN CAIRO

Sep 2023 - Expcted Dec 2025

B.Sc. in Computer Science

THE AMERICAN UNIVERSITY IN CAIRO

June 2019

- Senior Project: "GIM: GRR Improved". Security Incident response for distributed large-scale endpoint infrastructure. Grade: A

Experience

Microsoft

FULLSTACK SOFTWARE ENGINEER, MSN CONTENT GROWTH

April 2025 - Present

- Prototype LLM-driven visual parity testing with GPT-V and Azure Custom Vision for MSN delivery prongs; msn.com, edge, windows start and lockscreen.
- Implement enhancements and fix issues with MSN UI delivery prongs and backend OneService content network.
- Implement monitoring for validation issues across MSN content network and handle incident investigation and response.

Capgemini

SENIOR SOFTWARE ENGINEER, GENAI, CLOUD INFRASTRUCTURE SERVICES (CIS)

May 2024 - Nov 2024

- Designed and implemented Retrieval Augmented Generation (RAG) tools, frontend and backend, for internal clients and external ones like BMW and AWS.
- Developed MLOps infrastructure to automate testing, deployment, monitoring, and scaling of GenAI solutions.
- Led platform development for internal GenAI hackathon, integrating AWS GenAI offerings and infrastructure.

Dell Technologies

SOFTWARE ENGINEER II, OFFICE OF THE CTO

Jan 2022 - May 2024

- Engineered cross-platform software (web, mobile, Oculus) using React, JavaScript, Go, Python, GraphQL, and Unity with Extreme Programming and Lean product development practices.
- Maintained shared development infrastructure, pipelines, and applications with K8s, Rancher, and vSphere.
- Created prototypes for novel products and filed 4 patents with the USPTO.
- Led business transformation projects, working on cross-functional collaboration and training 40+ team members in Lean Six Sigma Yellow Belt practices.

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SOFTWARE ENGINEER II

July 2021 - Dec 2021

- Built optimization software, frontend and backend, for constrained vehicle scheduling and routing using Operations Research and ML algorithms.
- Developed code contribution pipelines and infrastructure on Google Cloud Platform (GCP) for a team of 30+ developers.
- Streamlined incubation-to-productization processes for R&D projects, developing all necessary tools and processes.

Data Science Hub, The American University in Cairo

FULL STACK DEVELOPER

June 2020 - July 2021

- Developed multi-modal user-friendly remote exam delivery software using React, Redux, Electron, Python, and FastAPI.
- Designed secure, event-driven architectures for cross-platform desktop and web applications using WebRTC, GRPC, and RabbitMQ.
- Built data collection and machine learning data pipelines for automated cheat-detection systems.

- Developed and maintained Android applications for last-mile trucking solutions using Kotlin, Jetpack, and RxAndroid.
- Designed real-time event-driven backend architecture with PubNub, AWS SQS, Lambda, Cognito, and API Gateway.
- Oversaw Android and IOS developers creating cohesive user experiences across Android and iOS platforms.

Skills

Expertise	Full Stack Development, Cloud Development, Extreme Programming, DevOps, DevXP, Event-driven Programming, Test-Driven Development (TDD), Continuous Integration (CI) and Deployment (CD), Technical Writing
Languages	Python, Go, JavaScript, TypeScript, Java, C/C++
Libraries & Frameworks	React, Redux, RTK, Node, Sequelize, GraphQL, FastAPI, Flask, Celery, Airflow
Testing	Playwright, Cypress, Puppeteer, JUnit, Mocha, Pytest, PyUnit, JUnit
Databases	MySQL, PostgreSQL, MongoDB, Redis, DynamoDB, BigQuery
Infrastructure	AWS, GCP, vSphere, Docker, Kubernetes, Helm, Terraform, Chef, Jenkins, Sentry, Snyk, Datadog, Prometheus, Grafana

Patents

- Optimizing Server and Data center Cooling using Intelligent Workload Scheduling
Patent Pending. Assigned to: Dell Technologies. Filed April 26, 2024. US No. 18/647367.
- Intelligent Software Development Work Deduplication
Patent Pending. Assigned to: Dell Technologies. Filed January 30, 2024. US No. 18/427606.
- Endpoint Machine Software Change Automation Pipeline
Patent Pending. Assigned to: Dell Technologies. Filed April 26, 2023. US No. 18/307150.
- Virtual Representation of Endpoints in a Computing Environment
Patent Pending. Assigned to: Dell Technologies. Filed November 4, 2022. US No. 17/980724.

Publications

- [Dr. Proctor: A Multi-modal AI-Based Platform for Remote Proctoring in Education](#)
Published in AIED 2021. Lecture Notes in Computer Science, vol 12749. Springer, Cham.
- [OPSCAN: Density-based Spatial Clustering in Opportunistic Networks](#)
Published in IEEE UEMCON, New York, 2020.
- [Cloud-based RISC-V SoC Design and Co-simulation](#)
Published in 7th RISC-V Workshop, 2017.