

Karim W. ElAzzouni

CONTACT INFORMATION

Location: London, UK
LinkedIn - Google Scholar - Personal webpage

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EXPERIENCE

Senior Software Engineer Meta Platforms

October 2021 - *Present*
London, UK

Monetization AI Foundations: Training Reliability *[July 2025 - Present]*

Founding engineer of London's group. Our team focuses on the AI training reliability of a fleet of ads recommendation systems models. Our flagship model, Generative Ads Model (GEM), is the industry's largest and most sophisticated RecSys model, trained on several thousand SOTA GPUs. I run the **productionization, developer efficiency** and **trunk reliability** programs in a 100+ person organization, leveraging innovative agentic workflow techniques to boost productivity, and building frameworks to keep our behemoth-of-a-fleet efficient, available, highly observable and maintainable.

Notable deliverables:

- Developed a testing framework that saved 5.5K engineering hours across the org
- Developed a trunk release framework that led to dropping the average trunk staleness from 28+ to under 5 days, and average and maximum incident TTM by 40% and 70% respectively.
- Both frameworks directly captured and reverted several OSS regressions in **PyTorch** (#171884, #191024)
- Introduced several agentic workflows to proactively detect, diagnose and fix failures automatically, leading to a 70% SLO attainment improvement
- Created and ran several oncall loops to uplevel reliability of our production workflows.

Core Ads Quality *[December 2021 - July 2025]*

The team is the central owner of the organic bid component in Meta's ads auction system. We built cross-app and infrastructure ads delivery solutions that focus on and optimize for long-term gain. Most notable projects:

- **Ads Conversion Familiarity "ACF"** *[March 2022 - September 2023]*

I acted as the engineering owner of a new hypothesis to increase long-term revenue and user engagement by boosting familiar high quality ads that make it easier for users to convert on purchase ads and become recurring purchasers through Meta products. Starting as the only engineer on the workstream, I successfully managed to build and launch tens of AB tests from ideation, implementation, maintenance, analysis and shipping. Later on I became the central owner of infrastructure and reliability within the workstream. The team grew to 6 engineers, all of which were onboarded by me, the workstream grew to become a stand-alone pod within my team with 20+ people working on it across 3 different timezones, and we managed to launch the new treatment generating **0.17%** increase in ads revenue per annum.

- **Developer Productivity and Foundations pod** *[September 2023 - July 2025]*

Co-founded the Developer Productivity and Foundation pod within my team to promote and advocate efficiency and productivity-focused projects. Selected projects:

- **UQL Testing Framework "UTF"**: Built an integration testing framework from scratch to increase productivity across the team and partner teams, as well as increase reliability of our systems. Achieved **1.8 EYS (Engineering Years Saved)**.
- **User features ingestion platform**: Built a dedicated user features ingestion platform to enable engineers within my team to define and consume user features in ads delivery sophisticated system. My work unblocked personalization efforts for ranking alterations, effectively allowing experimentation with a potential of **2.5%** increase in ads revenue per annum. This project also managed to achieve **2.71 EYS**.
- **Experiment Monitoring, Management and Reporting platform** Automates experiments' metric collection from various data sources centrally, and automatically generate reports in the form of standardized Google Docs that can be automatically scheduled and delivered over to users' inboxes, saving about **2.7 EYS** across the team. My project won the **"Best Time Saving Hack"** in our organization's Tooling Hackathon and was recognized by our Director.

Software Engineer II Software Engineer Microsoft

September 2021
January 2019 - September 2021
Copenhagen, Denmark

Worked as a Software Engineer at Dynamics 365 Finance and Operations product in the **Resilient & Sustainable Supply Chain (RSSC)** team.

- Worked for two years in the **Supply Chain Management Platform** team on several platform services.
- Acted as the **maintainer and subject matter expert** of the **Batch Processing Service**. Designed, implemented and completely rolled out the **Batch priority-based scheduling** feature, as well as a bunch of other essential features and bug fixes.
- Designed and implemented a new deployment pipeline for Finance and Operations trials environments on top of a family of in-house infrastructure microservices.
- Designed, implemented and completely own the **Cloud and Edge Validation Service**, an internal distributed integration testing framework for Supply chain management cloud and edge capability
- Was a member of the Cloud and Edge Platform team, building platform capabilities to extend the existing application to support distributed workloads.

Software Engineer Careem

April - December 2018
Dubai, UAE

Worked as a Software Engineer at Careem in the **Captain Payments** team.

Was responsible for designing, implementing, deploying, integrating and maintaining multiple web services related to Careem's drivers' payments.

EDUCATION

Faculty of Engineering, Alexandria University, Egypt

June 2016

B.Sc. in Computer and Systems Engineering.

- Cumulative Grade: Very Good with Degree of Honor (81.75%)
- **Capstone Project:** “Learning Semantics with Deep Learning for Cross Language Information Retrieval (English-Arabic)”

Arab Academy for Science and Technology, Alexandria, Egypt

June 2011

International General Certificate of Secondary Education (*IGCSE*)

PUBLICATIONS

“A Genetic Algorithm-based Approach for Content Delivery in Femtocaching-Assisted Networks”, Michael Azmy, **Karim ElAzzouni**, Ahmed Abuemeira, Mustafa ElNainay, **Accepted at IEEE Wireless Communications and Networking Conference (WCNC), 2017.**

“Using Deep Learning in Arabic-English Cross Language Information Retrieval”, Omar Attia, Michael Azmy, Ahmed Abuemeira, **Karim El Azzouni**, Omar Hussein, Nagwa M. El-Makky, Khaled Nagy, **Accepted at International Joint Conference on Knowledge Discovery and Information Retrieval (KDIR), 2016.**

SELECTED SKILLS

Languages: C++, Python, Java, C#, X++, PHP, Rust

Frameworks, libraries and software: ASP.NET Core, Spring boot, Docker, Service Fabric, Elastic Beanstalk, Terraform, Jenkins, Azure Pipelines, Elastic search, Kusto, Kenesis Streams, SQS

Internal Frameworks: Direct expertise with all frameworks mentioned here and here

Cloud: Microsoft Azure, Amazon Web Services

Database: SQL Server, MySQL, CosmosDB, DynamoDB, Redis

BigData: Hive, Presto, Spark