Mark Rofail

Software Development Engineer

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EXPERIENCE

Software Development Engineer II
Amazon, London, UK
November 2022 – Present

- Contributed to a successful transition from AWS EC2 to AWS Fargate (serverless architecture), resulting in a 22.7% increase in platform efficiency.
- Identified and fixed potential memory leaks by architecturing an automated chaos-testing workflow.
- Increased visibility into video-on-demand traffic by working on internal diagnostic tools, enabling on-calls root-cause problems faster.

Software Development Engineer II
GoCardless, London, UK
October 2021 – October 2022

- Led a team in integrating open-banking services to build fraud protection product.
- Reduced fraudulent transactions by 15% by collaborating with cross-functional teams to implement machine learning models for fraud detection.
- Spearheaded the design and implementation of a user-friendly Payment Intelligence dashboard, resulting in a 30% increase in user engagement.

Junior Backend Engineer
Shahry, Cairo, EG
July 2020 – September 2021

- Enhanced application security by transitioning to Knox tokens, achieving a seamless migration without any logout issues.
- Launched in-store POS payment solutions by collaborating with a third-party provider in three external merchant chains.
- Developed a microservice for third-party integrations, interfacing with the main monolithic service through RabbitMQ.

Junior Software Engineer
Informatica Middle East, Alexandria, EG
June 2019 – June 2020

- Enhanced a bank's customer dashboard search functionality by implementing a bilingual search capability for an Arabic-English database.
- Achieved a 4x improvement in pipeline performance by optimizing and compressing monthly E-statements post-generation.

EDUCATION

German University in Cairo
BSc. Computer Science and Engineering
September 2014 - June 2019 | Cairo, EG
GPA: 3.9 / 4.0 | Highest Honors

SKILLS

Programming   Java • Typescript • Python
Frameworks   Spring • React • Django
Testing   Mocha • Jest • Pytest • Cypress
Database   PostgreSQL • DynamoDB

PROJECTS & PUBLICATIONS

ICVES Publication
Multi-Modal Vehicle Attack Detection
Technology Tensorflow / Python

- Simulated camera-based attacks by manipulating the camera input of an Autonomous Vehicle.
- Ideated and developed a multi-modal module to identify alterations in the image sensor by cross-checking its congruence with the LiDAR sensor.

Google Summer of Code
PostgreSQL Contributor
Technology C / C++

- Enabled GIN index-scan between AnyArray-AnyElement types by adding new polymorphic operators.
- Enhanced the performance of update/delete queries from 25ms to 2ms by constructing a GIN index on the initial patch.

LEADERSHIP & AWARDS

Coding Sessions Facilitator - 2022
Conducted bi-weekly Ruby coding challenge sessions for new hires.

Best Project in Hackathon - 2022
Developed a Slack-bot to capture individual achievements to streamline referencing during performance evaluations.

Google Summer of Code Mentor - 2021
Mentored student throughout their PostgreSQL project.

Bachelor Project Supervisor - 2021
Supervised three undergraduate students in their bachelor projects.

ICVES Best Paper Award - 2019
Chosen as the top paper among 54 submissions.