

Yosef Samy

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EDUCATION

German University in Cairo

Oct 2020 - May 2025

Bachelor of Computer Science and Engineering

- **Bachelor thesis** - German Research Center for Artificial Intelligence (DFKI)
Learn2Clean Event Data: Optimizing Cleaning Pipelines for Event-Based Data | Python, Pandas, Numpy, Lifelines

EXPERIENCE

Software Engineer @ German Research Center for Artificial Intelligence (DFKI)

Nov 2024 – Jan 2025

- Developed **CleanSurvival**, a specialized tool designed to optimize cleaning pipelines for survival analysis models.
- Implemented advanced features such as hyperparameter tuning, reward graph editing, and multi-restart experiments for robust evaluation.
- Contributed to a **peer-reviewed paper** on CleanSurvival, highlighting its effectiveness in improving survival model performance.

Research Intern @ German Research Center for Artificial Intelligence (DFKI)

Mar 2024 – Oct 2024

- Extended the **Learn2Clean** framework for automated data cleaning to support survival analysis using Q-Learning.
- Equipped the framework with Cox PH Model, Random Survival Forests, and Deephit Neural Network.
- Conducted experiments on real-world datasets, showcasing enhanced predictive model performance.

Software Engineer Intern @ Valeo

Jul 2023 – Oct 2023

- Automated component testing in VectorCAST, reducing testing time by 50% and generating comprehensive test case reports integrated with IBM DOORS.
- Resolved 600+ potential code-breaking issues in C/C++ codebase using Klocwork, enhancing code stability and preventing critical failures.

PROJECTS

Scalable **Warehouse** Microservice | *Java, Spring Boot, Docker, PostgreSQL*

Mar 2025 – May 2025

- Developed a **Warehouse microservice** as part of a larger e-commerce system, focusing on inventory management, order packaging, and courier assignment.
- Implemented RESTful APIs using Spring Boot for stock operations, order processing, and user management.
- Utilized **RabbitMQ** for asynchronous event-driven communication, **Redis** for caching, and **PostgreSQL** for persistent storage.
- Built a responsive **React frontend** with TypeScript for warehouse dashboard and inventory management, interacting with backend services.

CodeMedics Virtual **Clinic** and **Pharmacy** | *Node.js, Express, MongoDB, React, Git*

Oct 2023 – Jan 2024

- Designed and developed a full-stack web application for managing patient appointments, health records, and prescriptions.
- Implemented secure authentication, Stripe payment integration, and PDF prescription downloads.
- Built real-time chat and video call features using WebSocket for seamless patient-doctor interactions.

Database Engine with Octree Index | *Java, Maven, Git*

Feb 2023 – May 2023

- Built a relational database engine with support for CRUD operations and SQL select queries.
- Implemented Octree indexing, reducing search execution time from 190ms to 87ms on 400,000 records.
- Enabled efficient handling of complex query filters using the Octree index.

SKILLS

- Java - Python - C++ - JavaScript - MS SQL Server - PostgreSQL - MongoDB - Spring Boot - Docker - kubernetes

ACHIEVEMENTS

- Ranked in the top 28% among 250+ teams in the ICPC regional finals qualifying contest.
- Coached and mentored 25+ new students at the university to kickstart their competitive programming journey.