

KARIM BEN AMARA

Software Engineer, Tunisia

☎ +216 27359031 ✉ karimbenamara91@gmail.com 🌐 karim-ben-amara 📄 kariyum 📁 Portfolio

Skills

Developer Tools: Docker - Kubernetes - Git

Areas of Expertise: Software Architecture And Development - Data Structures - System Design - Networking

Languages & Technologies: Scala - Python - Bash - Awk - Javascript - C/C++ - Dart - Rust - Spark - Svelte - Flutter

Experience

Cognira

July 2023 – Present

Full Time Software Engineer: Scala - Gatling - Akka - Spark - Python - CQL

Tunis, Tunisia

- Benchmarked and analyzed the calculation engine's performance, optimizing it to handle and sustain three times more load by building an internal app to extensively profile the system without introducing any significant latency.
- Significantly enhanced the notifications workflow, resolved all related issues, and decreased their latency to sub-milliseconds.
- Took the initiative to streamline onboarding new tenants by building a command-line interface that also serves as an internal dev tool, assisting the team in debugging and working on new features efficiently.

Cognira

February 2023 – June 2023

End of Studies Intern: Scala - Akka Http - Akka Streams - Cassandra - Redis - Python - CQL

Tunis, Tunisia

- Benchmarked different caching strategies, measuring server throughput, time to first byte (TTFB), cache and database servers load.
- Developed and implemented the testing app and numerous caching strategies.
- Implemented a simulator to apply different kind of workloads on the system.
- Automatic report generation and ranking justified with figures of harvested metrics during simulation.

Cognira

June 2022 – August 2022

Backend Team Intern: Scala - Spark - Akka Http - Html - Css

Tunis, Tunisia

- Developed an efficient and generic hierarchy data generator.
- Accelerated the dev team implementation and testing phases by providing a web interface to easily input and validate a hierarchy configuration with the ability to download generated data.

Education

National School of Computer Science

September 2020 – June 2023

Computer Science Engineering Degree; Specialized in Search Algorithms and AI field

Manouba, Tunisia

Preparatory Institute for Engineering Studies of Bizerte

September 2018 – June 2020

Preparatory Diploma in Math and Physics; Linear Algebra - Advanced Calculus - Physics

Bizerte, Tunisia

Projects

Ant Colony Optimization simulation 📄

Mai 2022 – June 2022

Javascript - Html - Meta-heuristics

- Designed and implemented ant colony optimization approach solving particularly the Travel Salesman problem.
- Added key features for the user to extract meaningful results, ability to tune the parameters and observe changes in real-time.

Artificial drone pilot 📄

July 2022 – August 2022

Python - Pygame - Genetic Algorithm - Neural Networks

- Implemented a neural network optimized by a genetic algorithm and was trained to manoeuvre a drone and hold still in a game environment.
- Analysed different methods and plotted the error variation of the average population.
- Implemented the physics of the drone, rotation, movements and animation.

Achievements

- Took role within the Google Developer Groups of Manouba where I helped organizing various events (Women Techmakers - Google DevFest...) and exposing newcomers to the state of the art of Google technologies specifically.
- Google machine learning course: Linear Regression – Image Classification.
- Google cloud badge: Create and manage cloud resources (Virtual machines, Docker, Kubernetes, Nginx).
- Completed Introduction to TensorFlow for Artificial Intelligence, Machine Learning and Deep learning on Coursera. DeepLearning.AI - Year 2021