Michel Omar Aflak, Software Engineer

(+33)630924591, aflakomar@gmail.com

LINKS

GitHub: 110+ public repositories
Medium: 12 articles, many in *Towards Data Science*
YouTube: 4 videos, Machine Learning
StackOverflow: 130+ answers

EXPERIENCE

Dec 2021 — *present*

Google — Software Engineer

Launched the Deep Links page in Play Console. Developed several data pipelines, that are time sensitive and critical to th
pipelines process data coming from 500M Android devices, or 26B messages daily. Project led to 12% of App Links doma
a stream of revenue by $xxM. Designed and implemented end to end patching feature for Android Deeplinks.

Feb 2021 — Aug 2021

Criteo — Software Engineer, Data

Redesigned from scratch, in PySpark, the pipeline that prepares data for training Criteo's machine learning models for Ads
handles multi-terabytes of data daily. Improved processing time, -300% on memory usage, -125% on computation power,
replaced old Scala codebase with Python. Developed a highly optimized C# code that transforms data for realtime inferen
prediction time by 3%.

Apr 2020 — Aug 2020

Zenly — Software Engineer, Android

Developed a highly customizable and optimized graphical library on Android allowing to draw, animate, write text and pl
images and videos, including an undo/redo framework, with a focus on memory management. Improved H264 encoding

Jun 2019 — Sep 2019

Twitter — Software Engineer, IOS

Worked with Media Client Infrastructure team. Improved video quality on high speed networks by developing a bitrate p
mobile side. A/B tested on 6M users, observed an increase in ads revenue by +0.56%, # of retweets by +0.74%, # of likes

Dec 2018 — Feb 2019

RandomCoffee — Software Engineer, Backend

RandomCoffee get employees in a company to meet each other based on their preferences. Generalized the way of express
Developed a matching algorithm (derived version of K-Medoid) that can match any number of people together instead of
given a set of constraints.

Jan 2018 — Feb 2018

Tribe — Software Engineer, Machine Learning

Tribe is a live multiplayer gaming platform that raised $6.5M from Sequoia Capital, Kleiner Perkins, and others. Develop
embedded machine learning model able to recognize hand gestures.

NOTABLE PROJECTS

2023

Programming language

A project that I particularily liked is the creation of my own programming language from scratch. Despite the funky name
language has a scanner, parser, compiler, and a virtual machine. It's all there. Banana programming language.

2023

Machine Learning Library

A machine learning library developed from scratch in Python, that allows the creation of models as graphs of layers. This
versatile, and able to represent a wide variety of architectures. I used it for instance to successfully train CNNs and GANs.

2021

YouTube Channel

After writing articles for many years, I decided to change my medium of expression. I started a YouTube channel February
program mathematical concepts, such as neural networks, from scratch. The Independent Code.

| 2020 | **King Of Ether** |
| | King of Ether is an existing game that I reimplemented on the blockhain of Ethereum using Solidity smart contracts. The scheme in itself. To start the game, a player has to send ETH to the contract and becomes the so called king. Then, every claim the throne must send 30% more ETH to the contract and will become the new king. When that happens, the ETH transfered to the account of the old king. And so on... If nobody claims the throne for 7 days in a row, the game ends, and dethroned by some mystical power... https://kingofether.github.io. |

| 2019 | **Leaf** |
| | Leaf is a device with radio capabilities that can be plugged directly in a smartphone. People using Leaf form a **mesh netwo** communicate over long distances (up to **3 km** between each node) without any internet connection. This personal projec concept to demonstrate possible alternatives for private decentralized communications. Leaf Project — Natural disaster co |

| 2018 | **Machine Learning Library from scratch** |
| | Four years ago, I decided to learn AI and more specifically neural networks. I taught myself by reading on the internet, an strong understanding of how neural networks work both mathematically and programmatically. I developed a machine lea Keras on GitHub. I wrote an article on Medium that got published in *Towards Data Science*, and gave a talk/lesson within *School Of AI* in Paris. |

AWARDS

| May 2016 | **Engineering Olympiad, Schneider Electric** |
| | *"Best Scientific Innovation"* award. **6th national** place, **2nd regional** place. Arrow impact prediction system. |

| May 2015 | **Engineering Olympiad, GRDF** |
| | **3rd regional** place, reached national competition. Gyroscopic mouse designed to filter essential tremors (movement disor |

EDUCATION

Sept 2017 — June 2021	**École Centrale d'Électronique de Paris**
Sept 2018 — Dec 2018	**INSEEC**
Sept 2016 — Jul 2017	**Institut Supérieur d'Electronique de Paris**

LANGUAGES   **English:** Fluent   **French:** Native   **Arabic:** Native