

Michel Omar Aflak, Software Engineer

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LINKS

[GitHub](#), [Medium](#), [YouTube](#), [StackOverflow](#)

INTERNSHIPS

Feb 2021 — Aug 2021

Criteo — Software Engineer

Paris

- Developed a distributed and optimized pipeline in PySpark from scratch that transforms multi-terabytes of data, trains ML models, and packages everything for production use. Improved processing time, memory footprint, code simplicity, and completely replaced old Scala codebase with Python.
- Developed a highly optimized C# code that transforms data for realtime inference. Reduced overall prediction time by -1.43%.

Apr 2020 — Aug 2020

Zenly — Software Engineer

Paris

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

Jun 2019 — Sep 2019

Twitter — Software Engineer

London

Worked with Media Client Infrastructure team. Improved video quality on high speed networks by developing a bitrate prediction model, mobile side. A/B tested on 6M users, observed an increase in ads revenue by +0.56%, # of retweets by +0.74%, # of likes by +0.25%.

Dec 2018 — Feb 2018

RandomCoffee — Software Engineer

Paris

- RandomCoffee get employees in a company to meet each other based on their preferences. Generalized the way of expressing matching rules.
- Developed a matching algorithm (derived version of K-Medoid) that can match any number of people together instead of only 2 previously, given a set of constraints.

Jan 2018 — Feb 2018

Tribe — Machine Learning

Los Angeles

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

NOTABLE PROJECTS

2021

YouTube Channel

After writing countless articles, I decided to change my medium of expression. I started a YouTube channel February 2021 where I 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 blockchain of Ethereum using Solidity smart contracts. The game is a Ponzi scheme in itself. To start the game, a player has to send ETH to the contract and becomes the so called king. Then, every person that wants to claim the throne must send 30% more ETH to the contract and will become the new king. When that happens, the ETH of the new king are transferred 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 the current king is 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 network** that allows them to communicate over long distances (up to 3km between each node) without any internet connection. This personal project was a proof of concept to demonstrate possible alternatives for private decentralized communications. Leaf Project — Natural disaster communication system.

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, and managed to get a strong understanding of how neural networks work both mathematically and programmatically. I developed a machine learning library akin Keras [on GitHub](#). I wrote an article [on Medium](#) that got published in *Towards Data Science*, and gave a talk/lesson within the organization *School Of AI* in Paris.

AWARDS

May 2016	Engineering Olympiad, Schneider Electric	Paris
	<i>"Best Scientific Innovation"</i> award. 6th national place, 2nd regional place. Arrow impact prediction system.	
May 2015	Engineering Olympiad, GRDF	Paris
	3rd regional place, reached national competition. Gyroscopic mouse designed to filter essential tremors (movement disorder).	

EDUCATION

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

LANGUAGES

French: Native **English:** Highly proficient **Arabic:** Native