Michel Omar Aflak

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EXPERIENCE

DeepMind — Senior Software Engineer

London, UK · Feb 2026 — *present*

- Knowledge graph memory for LLMs.
- Agentic markets simulation at scale.
- TPU duty cycle optimization.

Google — Software Engineer

London, UK · Dec 2021 — Feb 2026

- MCP servers integration for Gemini in Play Console.
- Built experimental Gemini-based AI agents that interact with Android devices through UI to complete a given task. Finetuned custom models to resolve referring expressions into bounding boxes on screen. Built evaluation pipelines for monitoring agent progress. Wrote injection code for adding agent to any Android application with no developer intervention.
- Prototyped and wrote designs for a RAG pipeline to index app contents. Project raised $30M and aims at indexing 1B app pages/day. Allocated engineers on project.
- Leading engineering effort for injecting code in Android AppBundles — notably for the Gaming Platform project where we inject a full Gemini conversational agent into Android games. Distributing tasks to 1–2 eng, coordinating with design, product, and eng. Owning experimentation stack.
- Designed and implemented end-to-end patching feature for Android Deep Links, involving: modifications in GmsCore, implementation of a storage solution, development of data pipelines, creation of APIs, and the design of a web UI in Play Console.
- Launched the Deep Links page in Play Console. Developed several critical, time sensitive data pipelines responsible for processing data coming from 1.4B Android devices daily. Project led to the fix of about 20% of App Links domains. Increased a stream of revenue by $xxM.

Criteo — Software Engineer

Paris, FR · Feb 2021 — Aug 2021

Redesigned from scratch, in PySpark, the pipeline that prepares data for training Criteo's machine learning models for Ads. The pipeline handles multi-terabytes of data daily. Improved processing time, –300% on memory usage, –125% on computation power, simpler code, and replaced old Scala codebase with Python.

Developed a highly optimized C# code that transforms data for realtime inference. Reduced overall prediction time by 3%.

Zenly — Software Engineer

Paris, FR · Apr 2020 — Aug 2020

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.

Twitter — Software Engineer

London, UK · Jun 2019 — Sep 2019

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%.

RandomCoffee — Software Engineer

Paris, FR · Dec 2018 — Feb 2019

RandomCoffee gets 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.

Tribe — Software Engineer

Los Angeles, CA · Jan 2018 — Feb 2018

Trained a neural network model, embedded on-device, able to recognize hand gestures on images. Tribe is a live multiplayer gaming platform that raised $6.5M from Sequoia Capital, Kleiner Perkins, and others.

NOTABLE PROJECTS

Building a Computer from NAND

2026

notboth.dev builds a working computer up from a single NAND gate — logic gates, arithmetic, memory, and a CPU — one layer at a time.

Wormhole Simulation 2025

Wormhole simulation by ray tracing light particles in curved spacetime, i.e. General Relativity.

Mask Based Attention 2025

Mask-based Attention is a research idea I explored, whose goal is to detect the "useful" parts of an input for a given prediction task, where "useful" is defined as "what can't be removed so that the prediction is still accurate". This leads to the idea of learning a model that predicts masks over the input.

CUDA Tensor Library 2025

Pynn is a toy tensor library developed from scratch, with a module for training neural networks. Tensor operations run in C or within CUDA kernels. The library has Python bindings for ease of use.

Programming Language 2023

A programming language developed from scratch in C++. Despite the funky name I gave it, the Banana programming language has a scanner, parser, compiler, and a virtual machine.

EIP-4671: Non-Tradable Tokens 2022

EIP-4671 is a protocol I designed for Non-Tradable Tokens on the Ethereum blockchain.

YouTube Channel 2021

After writing articles for many years, I decided to change my medium of expression. I started a YouTube channel in February 2021 where I program mathematical concepts, such as neural networks, from scratch: The Independent Code.

King of Ether 2020

King of Ether is an existing game that I reimplemented on the Ethereum blockchain using Solidity smart contracts — the game is a Ponzi scheme in itself. A player sends ETH to the contract to become the "king"; anyone who wants the throne must send 30% more ETH, and the previous king is paid out. If nobody claims the throne for 7 days, the game ends and the current king loses his ETH.

Leaf 2019

Leaf is a device with radio capabilities that can be plugged directly into a smartphone. People using Leaf form a **mesh network** that allows them to communicate over long distances (up to **3 km** between each node, and by jumping through nodes for longer distances) without any internet connection. This personal project was a proof of concept to demonstrate possible alternatives for private decentralized communications: Leaf Project.

Machine Learning Library from Scratch 2018

In 2017, I decided to learn AI and more specifically the in-and-out of 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 to Keras on GitHub. I wrote an article on Medium that got published in *Towards Data Science*, and gave a talk within the organization *School of AI* in Paris.

AWARDS

Engineering Olympiad, Schneider Electric *Paris, FR* ·May 2016

"Best Scientific Innovation" award. **6th national** place, **2nd regional** place. Arrow impact prediction system.

Engineering Olympiad, GRDF *Paris, FR* ·May 2015

3rd regional place, reached national competition. Gyroscopic mouse designed to filter essential tremors (movement disorder).

EDUCATION

École Centrale d'Électronique de Paris *Paris, FR* ·Sept 2017 — June 2021

INSEEC *London, UK* ·Sept 2018 — Dec 2018

Institut Supérieur d'Électronique de Paris *Paris, FR* ·Sept 2016 — Jul 2017

LANGUAGES

English: Fluent · **French**: Native · **Arabic**: Native