



APE HEX

Fullstack Developer ~ Engineer

Curious, attracted by technical challenges.
Reverse engineering black-box models.

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English Bilingual (TOEFL, TOEIC).
French Native.
German Mostly forgotten.

Coding C++, Python, Rust, Shell, Solidity, etc.
Data DBMS, SQL, Numpy, Parquet, etc.
ML Keras, PyTorch, Tensorflow, etc.
Ops ONNX, YARA, Ansible, hooks, etc.
Science Matlab, Octave, SciPy, SymPy, etc.
Security Burp, Foundry, Ghidra, Nmap, etc.
Web CSS, HTML, JS, Astro, Django, Node, etc.

Tech CTFs, research.
Science Math, science fiction.
Games Board and video games.
Sports Biking, climbing, mountaineering.

MACHINE LEARNING RESEARCHER — INDEPENDENT 1/2024 – current
Unified image and language generation with a latent diffusion framework operating on bytes.
Created the composite embedding and binary prediction layers, outperforming tokenization.
Experimented with byte-level modeling: decompilation, transactions, ASCII art, text diffusion, etc.

DATA ENGINEER — AFTERQUERY & ALIGNERR & PALISADE 9/2025 – 12/2025
Translated my experience into complex training tasks for LLM agents, in Docker containers.
Identified misalignment behaviors leading agents to execute forbidden scripts and transactions.

SECURITY RESEARCHER — FORTA NETWORK 7/2023 – 1/2024
Anticipated emerging hacking techniques during an in-depth survey of obfuscation techniques.
Developed specialized monitoring bots that detected numerous malicious transactions.

PROTOCOL DEVELOPER — DIADATA & RESERVE PROTOCOL 4/2023 – 6/2023
Developed plugins to integrate protocols and guarantee over-collateralization in Reserve-Protocol.
Developed a daemon to monitor oracle health and accuracy for DIAdata.

BLOCKCHAIN TRAINING — OPENZEPPELIN + CTF 1/2023 – 3/2023
Honed my skills through practical engagements in CTFs like Ethernaut and Damn-Vulnerable-DEFI.

BUG BOUNTY RESEARCHER — INDEPENDENT 3/2020 – 12/2021
Identified and resolved vulnerabilities in a variety of mobile apps and websites.

CYBERSECURITY TRAINING — CYBRARY + COURSERA 3/2020 – 10/2021
Extensive training in cybersecurity, including CTFs (Hackerbox, Pentesterlab, OverTheWire).

OPEN SOURCE CONTRIBUTOR — INDEPENDENT 1/2015 – current
Contributed PRs / issues to widely used projects: Keras, Transformers, Unsloth, Meta BLT, etc.
Developed and shared a range of articles, models, datasets, tools, web and LaTeX templates.

FULLSTACK DEVELOPER — INDEPENDENT 1/2017 – 12/2022
Translated expert insights into accessible tools, linking high-level decisions and technical execution.
Modernized applications with web interfaces and AI integrations, enhancing UX and efficiency.

ENGINEERING CONSULTANT — C3-EXPERT 9/2012 – 12/2016
Enhanced technical tools, with more accurate and efficient industry-specific calculations.
Conducted technical studies and simulations of plants for Arcelor, Koniombo Nickel, etc.

ENGINEERING INTERN — TOTAL 1/2012 – 6/2012
Documented, debugged and reworked a critical framework for optimizing chemical mixing.

M.S. IN GENERAL ENGINEERING — ECOLE CENTRALE DE LYON 9/2008 – 10/2012
Specialization in business development and data mining.

MACHINE LEARNING
Bypassing LLM safeguards with latent prompt crafting - WIP.
Image diffusion on fractal text - Encoding text as RGB in 3D space to perform image diffusion.
This title is already tokenized - Leveraging the hierarchical language representation of Unicode.
Tokenization is a dead weight - Byte level VAEs expand the context size and reduce the parameters.

BLOCKCHAIN SECURITY
Evasion techniques - 2023 SoTA of the obfuscation techniques in the blockchain space.

SUPERHOST — AIRBNB 9/2018 – 2/2020
Refurnished and optimized a space for accomodating travelers; reached the superhost status.

BIKE DELIVERY — DELIVEROO & FOODORA & UBER 1/2017 – 6/2018
Doubled down on my endurance training with an intense delivery rythm for several companies.