APE HEX

Fullstack Developer ~ Engineer

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

ME

CONTACT

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LANGS

English	Bilingual (TOEFL, TOEIC).
French	Native.
German	Rusty.

SKILLS

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, Django, Node, etc.

HOBBIES

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

AI / ML

MACHINE LEARNING RESEARCHER — INDEPENDENT   2024-01 – present
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   2025-09 – 2025-12
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

SECURITY RESEARCHER — FORTA NETWORK   2023-07 – 2024-01
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   2023-04 – 2023-06
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   2023-01 – 2023-03
Honed my skills through practical engagements in CTFs like Ethernaut and Damn-Vulnerable-DEFI.

BUG BOUNTY RESEARCHER — INDEPENDENT   2020-03 – 2021-12
Identified and resolved vulnerabilities in a variety of mobile apps and websites.

CYBERSECURITY TRAINING — CYBRARY + COURSERA   2020-03 – 2021-10
Extensive training in cybersecurity, including CTFs (Hackerbox, Pentesterlab, OverTheWire).

CODING

OPEN SOURCE CONTRIBUTOR — INDEPENDENT   2015-01 – present
Contributed PRs / issues to widely used projects: Keras, T-Bench, Transformers, etc.
Developed and shared a range of articles, models, datasets, tools, web and LaTeX templates.

FULLSTACK DEVELOPER — INDEPENDENT   2017-01 – 2022-12
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

ENGINEERING CONSULTANT — C3-EXPERT   2012-09 – 2016-12
Enhanced technical tools, with more accurate and efficient industry-specific calculations.
Conducted technical studies and simulations of plants for Arcelor, Koniambo Nickel, etc.

ENGINEERING INTERN — TOTAL   2012-01 – 2012-06
Documented, debugged and reworked a critical framework for optimizing chemical mixing.

M.S. IN GENERAL ENGINEERING — ECOLE CENTRALE DE LYON   2008-09 – 2012-10
Specialization in business development and data mining.

LINKS

MACHINE LEARNING
LLM cleaning app - WIP.
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.

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