



# 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.

ME  
CONTACT  
LANGS  
SKILLS  
HOBBIES

AI	<b>MACHINE LEARNING RESEARCHER</b> — 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.	
SECURITY	<b>DATA ENGINEER</b> — 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.	
CODING	<b>SECURITY RESEARCHER</b> — 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.	
ENGINEERING	<b>PROTOCOL DEVELOPER</b> — 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.	
WRITING	<b>BLOCKCHAIN TRAINING</b> — OPENZEPPELIN + CTF	1/2023 – 3/2023
	Honed my skills through practical engagements in CTFs like Ethernaut and Damn-Vulnerable-DEFI.	
SERVING	<b>BUG BOUNTY RESEARCHER</b> — INDEPENDENT	3/2020 – 12/2021
	Identified and resolved vulnerabilities in a variety of mobile apps and websites.	
SOCIETY	<b>CYBERSECURITY TRAINING</b> — CYBRARY + COURSERA	3/2020 – 10/2021
	Extensive training in cybersecurity, including CTFs (Hackerbox, Pentesterlab, OverTheWire).	
CRAFTING	<b>OPEN SOURCE CONTRIBUTOR</b> — INDEPENDENT	1/2015 – current
	Contributed PRs / issues to widely used projects: Keras, Transformers, Unislosh, Meta BLT, etc. Developed and shared a range of articles, models, datasets, tools, web and LaTeX templates.	
ARTS	<b>FULLSTACK DEVELOPER</b> — 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.	
TEACHING	<b>ENGINEERING CONSULTANT</b> — 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, Koniambo Nickel, etc.	
MENTORING	<b>ENGINEERING INTERN</b> — TOTAL	1/2012 – 6/2012
	Documented, debugged and reworked a critical framework for optimizing chemical mixing.	
WRITING	<b>M.S. IN GENERAL ENGINEERING</b> — ECOLE CENTRALE DE LYON	9/2008 – 10/2012
	Specialization in business development and data mining.	
PUBLISHING	<b>MACHINE LEARNING</b>	
	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.	
EDUCATION	<b>BLOCKCHAIN SECURITY</b>	
	Evasion techniques - 2023 SoTA of the obfuscation techniques in the blockchain space.	
TEACHING	<b>SUPERHOST</b> — AIRBNB	9/2018 – 2/2020
	Refurnished and optimized a space for accommodating travelers; reached the superhost status.	
WORKSHOPS	<b>BIKE DELIVERY</b> — DELIVEROO & FOODORA & UBER	1/2017 – 6/2018
	Doubled down on my endurance training with an intense delivery rhythm for several companies.	