

YANNICK ROY, PhD



AI, BLOCKCHAIN & NEUROTECH

ENGINEER, SCIENTIST & MANAGER

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Worldwide | Canada

EDUCATION

DOCTORATE DEGREE,
Neuroscience (BCI)
U. of Montreal
2015 — 2022

MASTER'S DEGREE,
Biomedical Engineering
McGill University
2014 — [not completed]

BACHELOR'S DEGREE,
Electrical Engineering
ETS
2007 — 2012

TECHNICAL DEGREE,
Computer Science
College Lionel-Groulx
2004 — 2007

PHD THESIS

Cognitive Training Optimization via
Closed-Loop Systems

SUMMARY

AI engineering leader and **PhD neuroscientist** with 15+ years spanning production software, machine learning, quantitative DeFi, neurotechnology and community building. Currently Head of AI at Almanak, **leading the development of multi-agent systems, developer infrastructure and AI products used by thousands of users.** Combines hands-on engineering with product strategy and cross-functional leadership, taking technically complex products from initial research and prototyping through production deployment and user adoption. I'm highly productive as an **AI native** developer & manager leveraging the latest tools and updating my practices weekly to keep up with the pace of AI.

BLOCKCHAIN & AI KEY HIGHLIGHTS

- Designed and shipped AI Agentic Frameworks for DeFi strategies.
 - Designed from scratch, **shipped to thousands of users.**
 - Used to develop strategies with **\$200M+ AUM (1B+ Volume)**
 - 12 AI Agents** working together (Strategist, Coder, QA, Reviewer, etc.)
 - AI generated DeFi strategies in **Vaults** (ERC-7540)
- Shipped products to thousands of users with
 - LLM models from OpenAI, Anthropic, Gemini, Grok, DeepSeek, Qwen, also leverage OpenRouter, Groq, Together.ai, Ollama
 - AI stack like LangChain/Graph, Pydantic AI, OpenAI Agent SDK, Google's A2A, MCPs, x402
- Shipped one of the most sophisticated **DeFi SDK** ([open source](#))
- Full-stack expertise of EVM Blockchains (Smart Contracts, Solidity, web3.py, Anvil, Tenderly, Alchemy, Explorers, Graphs).
 - Shipped products on Ethereum, Base, Optimism, Arbitrum, Avalanche, BSC, Plasma
 - Shipped products on various protocols like Uniswap V3, Aerodrome, TraderJoe, Pendle, Ethena, Morpho, Aave, Enso, HyperLiquid, etc.
 - APIs from CEXes, DEXes, CoinGecko, Etherscan, DexScreener, etc.
- Lead teams of engineers to ship products from ideation to users feedback.
- Token launch (**TGE** >100M MC): Legion, Cookie.fun, KoLs, Pendle, MM

NEUROTECH KEY HIGHLIGHTS

- Founded the largest international neurotech community — NeuroTechX.
- Founded (& exited) an int'l consulting & recruiting firm — NTX Services.
- Helped organize 150+ neurotech-related events of various sizes.
- Invited as a speaker for 40+ neurotech related events and conferences.
- Invited to 20+ TV, Radio & Podcast episodes.
- Given for 10+ private corporate talk, workshop, or training (paid).
- Invited to several round tables with gov agencies (FDA, FTC, etc.)
- Author of the first Deep Learning for EEG review paper. (1500+ citations)
- Co-author of *The NeuroTech Primer*, NeuroTechX's first book.
- Worked and collaborated with several neurotech companies.
- Launched the first neurotech student clubs - now in 35+ universities.

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AI ENGINEERING LEADER: Multi-Agent Systems · Quantitative DeFi

SKILLS

I Professional

Leadership
Project Management
Communication
Public Speaking
Marketing & Branding
Multidisciplinary Team Management
Working Under Pressure
Working with Tight Deadlines
Executive Functions & Responsibilities

SKILLS

I Technical

Python, C/C++, Matlab, R, .NET
Claude Code, Codex, Cursor, Grok,
LangChain/Graph, Pydantic AI, MCP,
A2A, x402, DeFi Vaults, WandB,
Hasura, Kubeflow, EVM, Solidity,
Machine Learning & Deep Learning,
Embedded Systems

SKILLS

I Scientific

Blockchain Data
Finance & Quant
AI & Deep Learning
Neurotech & BCIs / BMIs
Biosignals time-series analysis
+ all that comes with doing a PhD

RELEVANT WORK EXPERIENCE

HEAD OF AI

Almanak | 2022 – Present

Almanak provides a reliable DeFi stack for Quants

- Driving everything AI from PoC to shipping to users to listening to users' feedback to improve the product. Coordinating between R&D, Infra, Engineering, Data, UX and Web.
- Shipped a full AI Agentic Frameworks for DeFi strategies, used to develop strategies handling \$200M+ AUM.
- Shipped one of the most sophisticated SDK in DeFi (now Open Source!)
- Shipped several AI Agents, used by thousands of users (coding assistant, chatbot, blockchain tx troubleshooting, quant researcher, etc.)
- Developed Production-ready ML pipelines (ETL/Train/Fine-Tune/Serve) leveraging Python, SQL, BQ, DBT, Kubeflow, WandB.

CO-FOUNDER & EXECUTIVE DIRECTOR

NeuroTechX | 2015 – 2022

NeuroTechX is the largest international neurotech community, whose mission is to facilitate the advancement of neurotechnology.

- 30+ Chapters around the world. (19,000+ members)
- 35+ Neurotech student clubs at universities such as Berkeley, McGill, etc.
- 300+ Events from small gathering to conferences to hackathons.
- Respected entity in the field for its bottom-up impact on the field.

CO-FOUNDER & CHIEF SCIENCE AND TECHNOLOGY OFFICER

NeuroTechX Services | 2019 – 2022

NeuroTechX Services is a one-stop-shop for consulting and recruiting in neurotechnology, leveraging the NeuroTechX community and network.

- Worked with 20+ companies and institutions in the field.
- Closed headhunting mandates with companies in several countries.
- Delivered consulting services ranging from building a BCI devices to creating courses sold in many high-schools in the US, to developing an [Introduction to Neuro Entrepreneurship](#) course for McGill, to selling IP (patents), to helping startups fundraise, to coaching and reviewing CEOs speech and presentation, to doing marketing and go-to-market strategy.

LECTURER

ETS | 2015 – 2022

Teaching CS classes at ETS, an engineering university in Montreal.

- INF145, TCH010 - Intro & Advanced Programming in C.

SOFTWARE DEV. & AUTOMATION ENGINEER

SynergX, Orus3D, CAE, Videotron | 2006 – 2013

- Worked as a software dev. in C, C++, .NET across Telecommunication, Flight Simulators, and 3D Vision Systems.
- Worked on embedded systems, microcontrollers, PLCs, Digital I/Os, Modbus, UI/UX, Real Time systems, TCP-IP, C/C++, .NET
- Worked in 10+ countries to design, install, configure and troubleshoot our systems directly on the assembly line in factories (glass industry).

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AI ENGINEERING LEADER: Multi-Agent Systems · Quantitative DeFi

PUBLICATIONS

Roy, Yannick "The Kitchen Loop: User-Spec-Driven Development for a Self-Evolving Codebase" arXiv (2026).

Roy, Yannick, et al. "Deep learning-based electroencephalography analysis: a systematic review." Journal of neural engineering 16.5 (2019): 051001. **(2000+ citations)**

Roy, Yannick, and Jocelyn Faubert. "Is the Contralateral Delay Activity (CDA) a robust neural correlate for Visual Working Memory (VWM) tasks? A reproducibility study." Psychophysiology (2022).

Roy, Yannick, and Jocelyn Faubert. "Significant changes in EEG neural oscillations during different phases of three-dimensional multiple object tracking task (3D-MOT) imply different roles for attention and working memory." (2022)

Roy, Yannick, and Jocelyn Faubert. "Passive EEG Brain-Computer Interface (BCI) for a 3D Multiple Object Tracking (3D-MOT) task." (2022)

NeuroTechX et al. "The Neurotech Primer: A Beginner's Guide to Everything Neurotechnology" Amazon Publishing (2021)

Shah, Vinit, et al. "Validation of temporal scoring metrics for automatic seizure detection." 2020 IEEE Signal Processing in Medicine and Biology Symposium (SPMB). IEEE, 2020.

Roy, Yannick, et al. "The Neureka™ 2020 Epilepsy Challenge." NeuroTechX, 2020 (2020).

Roy, Yannick, et al. "StaR: An EEGLAB Framework for the Measure Projection Toolbox (MPT) Statistical Analyses to be Performed in R." Engineering Vibration, Communication and Information Processing. Springer, Singapore, 2019. 759-766.