

YANNICK ROY, PhD



NEUROTECH & BLOCKCHAIN

ENGINEER, SCIENTIST & MANAGER

CONTACT

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 Montreal, Canada

EDUCATION

DOCTORATE DEGREE,
Visual Neuroscience
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

We live in the best time of human history. For the first time ever can a specie reverse engineer itself. Enhance itself. Transcend itself. If that is not exciting enough to spend every waking hour being part of that journey, I don't know what is.

The value I bring to a team is my unique 360-degree expertise of the neurotech field. I can operate at high-level of efficiency and transition between engineering, business, strategy, marketing, product design and UX, societal and ethical impacts, regulation, and all that at any hierarchical level, whether in an executive meeting, or with partners, customers, interns or with the press for the general population.

I'm goal oriented and a firefighter. I can step up or step down depending on the team and the needs. I can get my hands dirty and be hands-on with my team in the field or hands-off and remote in my office if they have everything under control.

Best compliment I've received from a past employer during a promotion meeting with the board of directors: *"You don't hire Yannick to fill a position, you create a position to fulfill Yannick."* -Stéphane Baldo, CTO.

Note: in 2022, I took a pause from NeuroTech to explore Blockchain related technologies from an engineering and design perspective.

FEW KEY HIGHLIGHTS

- Founded the largest international neurotech community – NeuroTechX.
- Founded a profitable 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. (525+ citations)
- Co-author of *The NeuroTech Primer*, NeuroTechX's first book.
- Worked in 12 countries (America, Europe, Asia)
- Have inspired thousands of neurotech enthusiasts around the world.
- Worked and collaborated with several neurotech companies.
- Launched the first neurotech student clubs now in 35+ universities.
- PhD on Brain-Computer Interfaces (non-invasive).

References or links available upon request

YANNICK ROY

NEUROTECH & BLOCKCHAIN: ENGINEER, SCIENTIST & MANAGER

SKILLS

| Professional

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

SKILLS

| Technical

Python, C/C++, Matlab, R, .NET
Machine Learning & Deep Learning
Low & high -level programming
Embedded Systems
Electrical Engineering
Full-Stack basics skills

SKILLS

| Scientific

Neurotech & BCIs / BMIs
EEG, EMG, ECG, EOG
fNIRS & fMRI basics
Vision & Psychophysics
Biosignals time-series analysis
+ all that comes with doing a PhD

RELEVANT WORK EXPERIENCE

DATA SCIENTIST

Almanak | 2022 – Present

Almanak provides agent-based blockchain simulation envs.

- Worked at the intersection of Product, Research and MLOps.
- Developed Production-ready ML pipelines (ETL / Train / Fine-Tune / Serve)
- Worked in Python & SQL with BQ, DBT, Hasura, Kubeflow, WandB, EVM, Solidity and Smart Contracts, many blockchain APIs to fetch on-chain data.

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 prototype on a phone using in-ear EEG device to creating a BCI course 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, etc.

LECTURER

ETS | 2015 – 2022

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

- INF145– Advanced Programming in C.
- TCH010 – Intro to Programming in C.

SOFTWARE DEV. & AUTOMATION ENGINEER

SynergX, Orus3D, CAE, Videotron | 2006 – 2013

- Worked as a software developer for a few companies. Working mainly in C, C++, .NET in 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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NEUROTECH & BLOCKCHAIN: ENGINEER, SCIENTIST & MANAGER

PUBLICATIONS

Roy, Yannick, et al. "Deep learning-based electroencephalography analysis: a systematic review." Journal of neural engineering 16.5 (2019): 051001. **(850+ 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.