# YANNICK R O Y

### NEUROTECH MANAGER. SCIENTIST & ENGINEER



#### 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 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.

#### 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

## R O Y

#### NEUROTECH MANAGER, SCIENTIST & ENGINEER

#### 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

#### **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 highschools in the US, to developing an <u>Introduction to Neuro Entrepreneurship</u>
  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.

#### **AUTOMATION ENGINEER**

SynergX Technologies | 2011 - 2013

- Responsible for all machine-to-machine communication. Working with 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).

#### SOFTWARE DEV.

Orus3D, CAE, Videotron | 2006 - 2011

 Worked as a software developer for a few companies. Working mainly in C, C++, .NET in Telecommunication, Flight Simulators, and 3D Vision Systems.

## Y A N N I C K R O Y

#### NEUROTECH MANAGER, SCIENTIST & ENGINEER

#### PUBLICATIONS

**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." (under review)

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

**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).

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. "Deep learning-based electroencephalography analysis: a systematic review." Journal of neural engineering 16.5 (2019): 051001. **(525+ citations)** 

**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.