

Anthony M. V. Jakob

CONTACT INFORMATION

Murifeldweg 62
3006 Bern
Switzerland

Email: anthony_jakob@hms.harvard.edu
Web: <https://amvjakob.github.io>

EDUCATION

Harvard University 2021 - 2022
Master's Thesis, Computational Neuroscience
Advisor: Sam Gershman

École Polytechnique Fédérale de Lausanne 2019 - 2022
M.Sc., Biomedical Engineering and Computational Neuroscience

École Polytechnique Fédérale de Lausanne 2016 - 2019
B.Sc., Biomedical Engineering
Exchange year at UBC (2018 - 2019), Computer Science

PROFESSIONAL EXPERIENCE

Clubhouse Hockey 2021 - 2022
Full-Stack Software Engineer

Centre Hospitalier Universitaire Vaudois 2020 - 2021
Data Scientist

Infinight 2017 - 2020
Software Engineer, Web and Application Development

HONORS AND AWARDS

Bertarelli Fellowship in Translational Neuroscience and
Neuroengineering 2021 - 2022

EPFL Excellence Fellowship 2019 - 2020

EPFL Mobility Fellowship 2018

Meyer Award 2015

PUBLICATIONS

Jakob, A.M.V. and Gershman, S.J. (submitted). [Rate-distortion theory of neural coding and its implications for working memory.](#)

	Jakob, A.M.V. , Mikhael, J.G., Hamilos, A.E., Assad, J.A., Gershman, S.J. (submitted). Dopamine mediates the bidirectional update of interval timing.	
RESEARCH EXPERIENCE	Laboratory of Computational Neuroscience, EPFL 2020 Neural signatures of surprise and surprise-based learning in the human brain (Julia, Code)	
	Solar Energy and Building Physics Laboratory, EPFL 2019 SwissPV: Swiss household-level solar panel identification from ortho-rectified satellite images (Python, Code)	
TEACHING EXPERIENCE	PHYS-207: Quantum Physics, EPFL 2020 Instructor: Giovanni Dietler	
	PHYS-201: Electromagnetism, EPFL 2019 Instructor: Giovanni Dietler	
	BIO-201: Simulations of Neural Networks, EPFL 2019 Instructor: Jacques Rougemont	
	CS-119: Organic Chemistry, EPFL 2018 Instructor: Luc Patiny	
	CH-160: Advanced Chemistry, EPFL 2017 Instructor: Samuel Terrettaz	
	CS-119: Information Technology, EPFL 2017 Instructor: Anastasia Ailamaki, Marcel Salathé	
	Sophomore Mathematics, Gymnasium Kirchenfeld 2015 Instructor: Anthony Jakob	
INVITED TALKS	NiH Site Visit Symposium. November 23rd, 2021. Harvard Center for Brain Science (CBS) Seminar. October 1st, 2021.	
LANGUAGES AND FRAMEWORKS	English (Native), French (Native), German (Native), Italian (B2), Spanish (B2) Python (Numpy, Pandas, Pytorch, Tensorflow, Keras), Julia (Flux.jl, Turing.jl), Dart (Flutter), JS / TS (Node.js, Express, Angular, Deno), Bash , C++ , Java , MATLAB , PHP , R , SQL	

SKILLS

Fundamentals: Parallel and distributed computing, Unit testing, CI/CD (Jenkins), Cloud computing (Google Cloud), Agile development, Version control (Git)

Programming: Data structures, Optimization (Duality), Linear programming, Dynamic programming, Probabilistic programming

Machine learning: Random Forest, SVM, KNN, PCA, ICA, NNMF, GLM, Graphical models, Deep learning, Reinforcement learning, Computer vision

Web development: Frontend, Backend, REST API, Database management

SERVICE AND OUTREACH

Data Analytics Group, EPFL 2020 - 2022
Co-Founder of **Data Analytics Group at EPFL**, a student association promoting Data Science on campus

Swiss Sequoia Club 2020 - 2022
Co-Founder of **Swiss Sequoia Club**, a platform for entrepreneurship-minded students from EPFL, ETH and HSG

Education Outreach Department Representative, EPFL 2019 - 2020
Promotion of EPFL in German-speaking Switzerland

AISEC Lausanne 2019 - 2020
Data Analyst

Life Science Engineering Association, EPFL 2017 - 2018
Vice-President of Events committee

Coach for first-year students, EPFL 2017 - 2018