

# Anthony M. V. Jakob

---

## CONTACT INFORMATION

Murifeldweg 62  
3006 Bern  
Switzerland

Email: [anthony\\_jakob@hms.harvard.edu](mailto: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

Harvard CBS NeuroTheory Kickoff. March 14th, 2022.

NiH Site Visit Symposium. November 23rd, 2021.

Harvard 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