NADJA R. GING-JEHLI

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SHORT PROFILE

- **Researcher** in **computational psychiatry, model-based cognitive** and **social-cognitive neuroscience**
- **Consultant** for **(neuro)cognitive testing**, **eye-tracking**, and **computational modeling**
- **Neurocognitive psychologist** and **behavioral economist** focused on **translational research**
- **Hands-on experience** in conducting & analyzing **clinical trials** and non-clinical, **behavioral experiments**
- Profound expertise in **statistics**, **computational modeling**, and **machine learning**
- Entrepreneurial spirit with **10-years industry experience** in the **financial sector and consulting**
- **Self-driven first-generation** academic and college student

ACADEMIC BACKGROUND

Postdoctoral Researcher, *Brown University* 2022 – present
Providence, RI USA

Computational Psychiatry & Cognitive Neuroscience (Main Mentor: Michael J. Frank)
Modeling expert on multiple clinical center grants for mood-related mental health disorders

PhD in Psychology and Neuroscience, *The Ohio State University* (GPA: 3.95) 2019 – 2022
with Specialization: model-based cognitive neuroscience
Columbus, OH USA

Dissertation: Characterizing adult attention-deficit hyperactivity disorder (ADHD) with a multidisciplinary computational approach including novel neurocognitive testing and physiological measures.
Advisor committee: Patricia Van Zandt, L. Eugene Arnold, Brandon Turner, Jay Myung

Master of Arts in Psychology, *The Ohio State University* (GPA: 3.95) 2017 – 2019
with Specialization: cognitive psychology and neuroscience
Columbus, OH USA

Master's thesis: On the implementation of computational psychiatry within the framework of cognitive psychology and neuroscience.
Advisor committee: Patricia Van Zandt, Roger Ratcliff, L. Eugene Arnold

Additional coursework in Psychology, *University of Zurich* 2016 – 2017
Zurich, Switzerland

Biological Psychology I & II, Neuroeconomics, Social Psychology I & II
(Neuroscience, Immunology, Genetics, Epigenetics, Endocrinology)

Master of Arts in Economics, *University of Zurich* (GPA: 3.53) 2015 – 2017
with Minor: behavioral and experimental economics
Zurich Switzerland

Graduation with honors: magna cum laude
Master's thesis: Situational determinants of social preferences.
Advisor: Ernst Fehr

Additional coursework in Mathematics, *Swiss Federal Institute of Technology (ETH)* 2014 – 2015
Zurich Switzerland

Real Calculus I & II, Linear Algebra I & II

Bachelor of Arts in Economics, *University of Zurich* (GPA: 3.49) 2012 – 2014
Zurich, Switzerland

Graduation with honors: magna cum laude
Bachelor's thesis: Generosity across economic contexts.
Advisor: Roberto A. Weber

Bachelor of Science in Business Administration, *Zurich University of Applied Sciences (ZHAW)* 2008 – 2012
Winterthur, Switzerland (GPA: A (best))

Graduation with honors: Dean's List Award in recognition of outstanding academic achievement
Awarded with the Rieter-Award for the best Bachelor Thesis in 2012:
"How corporate governance of a consultancy can benefit from findings in behavioral economics – How implicit incentive signals influence intrinsic motivation"

Industrial Psychology with Certificate from KLZ, *Commercial Learning School (KLZ)* 2007 – 2008
Zurich, Switzerland

Human Resources Advisor with Certificate, *AKAD School of Business* 2006 - 2007
Zurich, Switzerland

Apprenticeship with Vocational Baccalaureate Diploma, *Graubündner Kantonalbank* 2004 – 2007
Chur, Switzerland

PROFESSIONAL EXPERIENCE

Brown University, Providence, RI USA 09/2022 – present
Postdoctoral Researcher in Computational Psychiatry & Cognitive Neuroscience

- Developing a novel neurocognitive task battery including cognitive and social-cognitive features
- Testing a unified modeling approach to characterize disorder-specific and transdiagnostic features across domains and over time
- Directing several independent research projects in the domain of computational psychiatry across disorders and across species
- Examining conflict-processing and intracranial EEG signatures of people with parkinson's disease (PD)

BGBehavior LLC, Providence, RI USA 02/2023 – present
Co-founder

- Consulting in neurocognitive testing & computational modeling
- Developing multi-sided platform (*Violucid*) for clinicians, scientists, & users for accessible & proactive mental well-being

The Ohio State University, Columbus, OH USA 08/2017 – 08/2022
PhD in Psychology and Neuroscience

- Independently designing, programming, and piloting multiple cognitive and social-cognitive tasks to study cognitive control, cognitive flexibility, and social-cognitive behavior
- Independently collecting and analyzing behavioral, electroencephalographic (EEG) and eye-tracking data
- Class project: collecting and analyzing functional magnetic resonance imaging data (fMRI)
- Experience in administering laboratory tasks to clinical and non-clinical populations (adults and children)
- Experience in computational modeling and machine learning
    - Applying machine learning algorithms and sequential sampling models to link behavioral model parameters from neurocognitive tests with EEG data and eye-tracking data (gaze and pupil measures)
    - Analyzing experimental data (e.g., task performance on go/no-go tasks, perceptual discrimination tasks, task-switch paradigms, economic choice tasks) from non-clinical and clinical studies using diffusion decision models, race diffusion models, ballistic accumulator models, ex-Gaussian distribution models, and reinforcement learning models
    - Programming of neural networks to understand potential different causes of autism spectrum disorders
- Experience in clinical research
    - Conduct own clinical study (from IRB submission to publication as PI)
    - Assisting in a randomized clinical trial for neurofeedback treatment for childhood attention-deficit hyperactivity disorder
    - Performing biostatistical analyses (e.g., linear mixed modeling, moderator and mediator analyses) for various non-pharmacological interventions for ADHD and for a pharmacological intervention for autism spectrum disorder
    - Independently conducting semi-structured clinical interviews (K-SADS) after being trained by medical doctors
    - Independently collecting and evaluating responses on various clinical questionnaires after being trained by clinicians and medical doctors

University of Zurich, (20-40% employment) 07/2013 – 01/2017
Research Assistant, Zurich, Switzerland

Chair of Behavioral Economics (Prof. Roberto Weber), Department of Economics

- Directing several independent research projects
- Analyzing experimental and field data with STATA
- Programming experiments with "z-Tree"
- Assisting in designing and conducting experiments at the Economics Laboratory
- Conducting literature research, surveys, field and online studies

Swiss Federal Institute of Technology, ETH (20% employment) 11/2013 – 07/2017
Laboratory Assistant, Zurich, Switzerland

Decision Science Laboratory, Department D-GESS, Behavioral Studies

- Responsible for checking experiments programmed with z-Tree
- Writing codes for PowerShell to run experiments
- Independently conducting laboratory experiments
- Assistance in conducting laboratory experiments
- Helping others with programming experiments with "z-Tree"

Statistical Bureau, City of Zurich (60% employment)
Internship as Research Assistant, Zurich, Switzerland 07/2013 – 09/2013

- Data collection, preparation and statistical analysis (SAS & Excel)

Fehr Advice & Partners AG (50% employment) 03/2012 – 02/2013
Junior Consultant & Executive Assistant, Zurich, Switzerland

- Junior Consultant in several client projects
- supervision of 4 team assistants

UBS AG (100% employment) 07/2007 – 02/2012
Client Advisor Assistant, Executives/Entrepreneurs Private Banking, Zurich, Switzerland 03/2011 – 02/2012

- Worked closely with specialists from Investment Banking
- supported Client Advisors

Individual Client Advisor, Rüschlikon, Switzerland 09/2008 – 02/2011

- Managed own client book (business volume approx. CHF 140M)
- Deputy for branch manager & trained apprentices in practice and in financial mathematics

General Client Advisor, Zollikerberg, Switzerland 07/2007 – 08/2008

Graubündner Kantonalbank (100% employment) 08/2004 – 06/2007
Apprenticeship with Vocational Maturity Diploma, Chur, Switzerland

PUBLICATIONS

Published Articles

*Mentees

1. Ging-Jehli, N.R., Arnold, L.E., Van Zandt, T. (2023). Cognitive & attentional mechanisms of cooperation: implications for incentive designs and computational psychiatry. *Cognitive, Affective, & Behavioral Neuroscience.*
2. Ging-Jehli, N.R., Painter, Q.A.*, Kraemer, H., Roley-Roberts, M.E., Panchyshyn, C.*, deBeus, R., Arnold, L.E. (2023). A Diffusion Decision Model Analysis of The Cognitive Effects of Neurofeedback for ADHD. *Neuropsychology.*
3. Ging-Jehli, N.R., Kraemer, H., Arnold, L.E., Roley-Roberts, M.E., deBeus, R. (2023). Latent cognitive components moderate neurofeedback response in ADHD – A computational modeling analysis of a randomized clinical trial. *Journal of Clinical and Experimental Neuropsychology.*
4. Roley-Robert, M.E., Bergman, R., Pan, X., Tan, Y., Hendrix, K., deBeus, R., Kerson, C., Arns, M., Ging-Jehli, N.R., Connor, S., Shrader, C., Arnold, L.E. (2022). Comorbid anxiety and disruptive behavior

disorders but not ADHD presentation moderate neurofeedback effect in children with ADHD. *Applied Psychophysiology and Biofeedback*.

5. Ging-Jehli, N.R., Arnold, L.E., Roley-Roberts, M.E., deBeus, R. (2022). Characterizing underlying cognitive components of ADHD presentations and co-morbid diagnoses – A diffusion decision model analysis. *Journal of Attention Disorders*.
6. Ging-Jehli, N.R., Ratcliff, R., Arnold, L.E. (2021). Improving Neurocognitive Testing using Computational Psychiatry – A Systematic Review for ADHD. *Psychological Bulletin*.
7. Ging-Jehli, N.R., Ratcliff, R. (2020). Effects of aging in a task-switch paradigm with the diffusion decision model. *Journal of Psychology and Aging*.
8. Ging-Jehli, N.R., Deepa, M., Hollway J., Hurt, E., Moone, S., Arnold, L.E. (2020). Exploring cholesterol supplementation for autistic symptoms in Children with Low Cholesterol. *Journal of Developmental and Physical Disabilities*.
9. Ging-Jehli, N.R., Schneider, F.H., Weber, R.A. (2020). On self-serving strategic beliefs. *Journal of Games and Economic Behavior*.
10. Davis, A. L., Jehli, N.R., Miller, J.H., & Weber, R.A. (2015). *Generosity across contexts*. CESifo Working Paper, No. 5272, Center for Economic Studies and ifo Institute (CESifo), Munich.

Articles Under Review

11. Ging-Jehli, N.R., Arnold, L.E., Sellers J.*, Van Zandt, T. (submitted). Broader visual processing and distinct pupil dynamics facilitate resolving perceptual conflict and compensate for ADHD distractibility.
12. Ging-Jehli, N.R., Kuhn, M., Blank, J.M., Chanthrakumar, P.*, Steinberger, D.C., Yu, Z., Herrington, T.D., Dillon, D.G., Pizzagalli, D.A., Frank, M.J. (submitted). Cognitive signatures of depression, anhedonia, and affective states using computational modeling and neurocognitive testing.
13. Ging-Jehli, N.R., Cavanagh, J.F., Ahn, M., Segar, D.J., Asaad, W.F., Frank, M.J. (submitted). Pump the brakes: Distinct basal ganglia decision dynamics under conflict and uncertainty.
14. Strittmatter, Y., Spitzer, W.H., Ging-Jehli, N.R., Musslick, S. (submitted). A jsPsych Touchscreen Extension for Behavioral Research on Touch-Enabled Interfaces.

Published Conference Abstracts

1. Ging-Jehli, N. R., & Arnold, L. E. (2023). 13.3 Cognitive Role of EEG Theta/Beta-Ratio for Behavior: Accounting for ADHD Heterogeneity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 62(10), S344.
2. Ging-Jehli, N., Arnold, L. E., Sellers, J.*, & Van Zandt, T. (2022). 30.3 Eye-Tracking, Gaze, and Pupil Dynamics in ADHD: Biofeedback Possibilities During Novel Perceptual Conflict Task. *Journal of the American Academy of Child & Adolescent Psychiatry*, *61*(10), S323.
3. Painter, Q. A.*, Ging-Jehli, N., Arnold, L. E., Roley-Roberts, M. E., & Pan, X. J. (2022). 30.4 The Effect of ASD Features on Neurocognitive Change With Neurofeedback in ADHD: New ICAN Data. *Journal of the American Academy of Child & Adolescent Psychiatry*, *61*(10), S323.
4. Roley-Roberts, M., Kerson, C., Ging-Jehli, N., & Pan, X. (2021). 30.2 Moderating Effects of Psychiatric Diagnoses on Neurofeedback for ADHD at 25-month Follow-up. *Journal of the American Academy of Child & Adolescent Psychiatry*, *60*(10), S304.
5. Ging-Jehli, N., Arnold, L. E., deBeus, R., Roley-Roberts, M., & Kraemer, H. (2021). 30.4 Underlying Cognitive Components Respond to Neurofeedback For ADHD And Moderate Clinical Outcome. *Journal of the American Academy of Child & Adolescent Psychiatry*, *60*(10), S305.
6. Arnold, L. E., Roley-Roberts, M. E., Ging-Jehli, N., Kerson, C., Pumphrey, K., & Loo, S. K. (2020, October). ADHD Neurofeedback 25-Month Follow-Up, Moderation of Response, and Neurocognitive Subtyping. In *2020 Virtual Meeting*. AACAP.

Current Projects

- A unified modeling approach to characterize disorder-specific and transdiagnostic features across cognitive and social domains and over time
- Characterizing bipolar disorder, depression, and schizophrenia: disentangling the roles of working memory and reinforcement learning
- Computational phenotyping of obsessive-compulsive disorders (OCD) within approach-avoidance Processing context
- Neuronal and attentional signatures of attention-deficit/hyperactivity disorder (ADHD) within a novel cognitive flexibility task
- Applying the Diffusion Decision Model and Machine Learning Algorithms to the Neuropsychological Test Performances and EEG resting state activity in an ADHD Sample from the MTA study

Selected Public Outreach and Press Releases

Interview on the weekly "Wellness Wednesday" show on "All Sides with Ann Fisher" - a live public affairs talk show on WOSU-NPR (89.7 FM) Radio in Columbus, Ohio. Link: Radio Interview on Computational Psychiatry and ADHD - YouTube

Interview with Psychiatry & Behavioral Health Learning Network (Magazine). Link: Using Computational Models to Improve ADHD Diagnosis and Treatment (hmpgloballearningnetwork.com)

Press coverage in *The Science Times*. Link: Computational Models Could Help Diagnose Children with ADHD | Science Times

Press release: A pursuit of better testing to sort out the complexities of ADHD (osu.edu)

Ad Hoc Journal Reviews (N≥27)

Clinical EEG and Neuroscience; European Child & Adolescent Psychiatry; Frontiers in Psychology; Journal of Autism and Developmental Disorders; Journal of Cognitive Neuroscience; Molecular Psychiatry; Nature Communications; NeuroImage; Neuropsychology; Neuroscience and Biobehavioral Reviews; Psychological Medicine; Science Advances

Research Grants

Carney Institute's Advancing Research Careers (ARC) program (NINDS/NIH) for implementing independent research project "smartphone-based perpetual games with mechanistic neurocognitive assessments" (Amount: USD 25,000)	2023 – 2025
Swiss National Science Foundation for implementing independent research project "Using Computational Psychiatry to explore transdiagnostic features of neurodevelopmental- and mood-related disorders" (Amount: CHF 10,000)	2023 – 2025
Swiss National Science Foundation for implementing independent research project: "Using Computational Psychiatry for Phenotyping ADHD" (Amount: CHF 3,000)	2019 – 2020

Awards And Honors

Travel Award for the **American College of Neuropsychopharmacology (ACNP) conference** (Amount: USD 1,000)	2023
ThinkSwiss & Fullbright Alumni Travel Award, Embassy of Switzerland in the USA (Amount: USD 500)	2023
Swiss National Science Foundation Postdoc Award, Switzerland (Amount: CHF 60,000)	2023
Travel & Networking Award, Women of Mathematical Psychology (Amount: EUR 500)	2023

NIH Computational Psychiatry Postdoctoral Training (**T32**), Brown University, USA 12/2022 – 09/2023
(Amount: USD 113,680)

Presidential Fellowship, The Ohio State University, USA 08/2021 – 08/2022
(Amount: USD 40,000)

Swiss National Science Foundation Graduate Fellowship**,** Switzerland 01/2019 – 12/2020
(Amount: CHF 93,725)

University Fellowship, The Ohio State University, USA 08/2017 – 08/2018
(Amount: USD 20,000)

Graduation with honor: magna cum laude, University of Zurich, Switzerland 2017

Graduation with honor: magna cum laude, University of Zurich, Switzerland 2014

Named to the **Dean's List** in recognition of outstanding academic achievements, Switzerland 2012

Awarded the **Rieter-Prize** for the best Bachelor Thesis in 2012, Switzerland 2012

ACADEMIC PRESENTATIONS (CONFERENCES AND INVITED TALKS)

Oral Presentation "Cognitive Role of EEG Theta/Beta-Ratio for Behavior: Accounting for ADHD Heterogeneity", at the American Academy of Child and Adolescent Psychiatry (AACAP) conference, New York City (USA) 2023

Oral Presentation "Towards a better ecosystem for managing, caring, and researching mental health conditions" ThinkSwiss Event at the Swiss Embassy, Washington DC (USA) 2023

Oral Presentation "Dissecting decision dynamics in the basal ganglia" at the Mathematical Psychology Conference, Amsterdam (NL) 2023

Poster Presentation "Multidimensional computational phenotyping of anhedonia & depression" at the Computational Psychiatry Conference, Dublin (IE) 2023

Oral Presentation "Using game theory and experimental economics to study social-cognitive characteristics in ADHD", Social-Cognitive Seminar Series at Brown University, Providence RI (USA) 2023

Poster Presentation "Broader visual processing and distinct pupil dynamics facilitate perceptual conflict and compensate for ADHD distractibility", at the Mental Effort Workshop, Providence RI (USA) 2022

Oral Presentation "Eye-tracking, Gaze, and Pupil Dynamics in ADHD: Biofeedback Possibilities during Novel Perceptual Conflict Task", at the American Academy of Child and Adolescent Psychiatry (virtually), Toronto (CA) 2022

Oral Presentation "Addressing ADHD and comorbidities with computational psychiatry: using new integrative testing; refining clinical charactristics; and tailoring treatments", at Brown University, USA 2022

Oral Presentation "Personalized medicine using computational psychiatry", at the American Academy of Child and Adolescent Psychiatry (virtual due to COVID-19) 2021

Oral Presentation "Neurocognitive subtyping of ADHD by Computational Psychiatry", at the International Conference on ADHD by CHADD (virtual) 2020

Oral Presentation "Using Computational Modeling as a Moderator Analysis to Understand the Benefits of Neurofeedback for ADHD", at the American Academy of Child and Adolescent Psychiatry (virtual due to COVID-19) 2020

Poster Presentation "Computational Psychiatry: Studying ADHD in neurocognitive tests", at the Society for Neuroscience Conference, Chicago, IL (USA) 2019

Oral Presentation "ADHD/ASD – A different way how to perceive the world", at the Cincinnati Children's Hospital Medical Center, USA — 2019

Poster Presentation "On the implementation of computational psychiatry to study ADHD", at the Institute for Behavioral Medicine Research Conference, The Ohio State University, USA — 2019

Poster Presentation "Generosity across contexts" at the Social Norms and Institutions, International Conference at the Congressi Stefano Franscini (CSF) of ETH Zurich, Ascona, TI (CH) — 2015

TEACHING

Sheridan Teaching Seminar (Certificate I), Brown University — 2023
Independently designing and preparing (online) course:
"Foundations of Computational Psychiatry Toolkits and Applications"
Excerpt: *In this course, we go beyond the typical focus on technical modeling skills.*
Instead, we cover different tools and delve into the holistic process of computational modeling in psychiatry.

Graduate Teaching Associate, The Ohio State University — 2021
Preparation and presentation of lectures, preparing syllabi, preparing homework and quizzes, supervision of group work, grading homework, assignments, tests and quizzes.
The first two courses are undergraduate and graduate level courses. The last three courses are undergraduate level courses.

PSYCH2220: Data Analytics in Psychology
PSYCH5613H: Biological Psychiatry
PSYCH5614: Cognitive Neuroscience
PSYCH3331: Abnormal Psychology
PSYCH4475: Psychology of The Self

Apprenticeship Trainer, UBS AG — 2008 – 2011
Preparation and presentation of lectures in economics, banking, and finances.
Supervision of apprentices (including developing, conducting, and grading essays, assignments and quizzes).

SUPERVISION OF UNDERGRADUATE AND GRADUATE STUDENTS

Advising data science student (Shiqi Wang) in statistical analyses & machine learning at Brown University	10/2023 – current
Advising undergraduate capstone project in decision sciences (Elizabeth Duchan) at Brown University	09/2023 – current
Advising medical student (Ahmed Abdelbaki) at The Ohio State University	08/2023 – current
Advising engineering student (Swarag Thaikkandi) in cognitive computational modeling	09/2022 – current
Advising clinical/medical graduate students (Pranavan Chanthrakumar, Quinn Painter) and undergraduate students (Qile Jiang) in computational modeling	09/2022 – 04/2023
Advising undergraduate research assistants (Karly Britt, Aditya Maroju, Prateek Palsule, Jacob Sellers) in the Van Zandt lab (mentoring in: conducting statistical analyses, collecting eye-tracking and EEG data, applying computational models, applying to graduate school)	08/2020 – 05/2022
Educating/mentoring research assistants (Shea Connor, Alex Lingel, Madeline Thomas, Catherine Panchyshyn) in the conductance of laboratory experimental paradigms (assistants from various labs)	02/2019 – 12/2019
Educating/mentoring research assistants (Justin Voyzey, Sam Stelnicki, Saarthak Gaur) in the conductance of eye-tracking studies (assistants from various labs)	01/2018 – 12/2018

University and community Service

Modeling advisor for the open-source HDDM toolbox – helping resolving modeling issues through google-collab list	2022
Statistical advisor for medical and clinical students conducting statistical analyses in SPSS and R	2022
Volunteered multiple undergraduates with their application documents for PhD programs	2020-2022
Guest lecture in an undergraduate course: how to find research topics and how to apply for PhD programs	2021
Internal workshop for undergraduates: Using R to simulate data with the diffusion decision model	2019
Guest lecture as a volunteer at the high school in Pfaeffikon, ZH (Switzerland). Topic: "What is Macroeconomics and how to handle money responsibly?"	2011

Professional Memberships

Psychonomic Society
Society for Mathematical Psychology
Society for Neuroscience
Member of SwissImpact
Transcontinental Computational Psychiatry Workgroup (TCPW)
Women of Mathematical Psychology

Additional Training

Reinforcement Learning Workshop (1 day), Mathematical Psychology Conference	2023
Med Tech Leadership Program (6 months), New England Medical Innovation Center	2022/2023
Dynamic Causal Modeling Workshop (2 days), Brown University	2022
Computational Modeling Workshop (2 weeks), Carney Center for Computational Brain Science	2022
Modeling EEG Data Workshop (2 weeks), Brainstorm EEG Challenge, Brown University	2022
Foundation of Neuroscience I and II, School of Medicine (1 year), Ohio State University	2018/2019
Computational Psychiatry Workshop (1 week), Zurich (Switzerland)	2019
Leadership Workshop for **apprenticeship trainers** (1 week), UBS AG	2008
European Computer Driving License Certificate (1 year), Chur (Switzerland)	2007
Swiss **IT Certificate** (1 year), Chur (Switzerland)	2007

Programming & Technical Proficiency

Proficient in **R**; Advanced in **STATA, SPSS**, and **WinBUGS**, Knowledge in **SAS and JASP**

Proficient in **MATLAB** (including toolboxes: **Psychtoolbox, Signal Processing, ERPLab**)

Proficient in **z-Tree (programming language: C++)** ; a free program for real-time interactions used in laboratory economic experiments

Proficient in conducting **eye tracking** studies using **eyelink and gazepoint**

Proficient in **Stan**

Advanced in **Python, LATEX, Fortran**

Proficient in working with operating systems: **Linux**, **IOS** (mac), and **Microsoft**

Advanced in conducting **full-cap** electroencephalographic (**EEG**) studies

Advanced in writing **bash scripts**

Knowledge in conducting **fMRI** studies

COMPUTATIONAL MODELING & MACHINE LEARNING PROFICIENCY

Proficient in using **of different computational modeling packages: brms package for RStan, HDDM in Python, DMC in R, fast-DM, diverse inhouse codes in Matlab, Fortran and RStan (programming own functions)**

Proficient in implementing different **computational models** (e.g., sequential sampling models, descriptive distribution models) within **Bayesian** and **Frequentist** frameworks

Proficient in applying different **machine learning** algorithms (e.g., **support vector, clustering, logistic regression, neural networks, principal and independent component analyses, factor analyses**)

STATISTICAL PROFICIENCY

Proficient in **multi-level linear mixed modeling** and **Bayesian hierarchical modeling**

Proficient in **moderator** analyses and **mediator** analyses (particularly for randomized clinical trials)

Proficient in **ANOVA**s, simple and multivariate **regressions**

Proficient in **Time Series Analyses**

Knowledge in **structural equation modeling** and **dynamic causal modeling**

LANGUAGE PROFICIENCY

German – Native (Swiss citizen)

English – Full Professional Proficiency (oral and written); First Certificate in English; TOEFL iBT English Diploma (reading: 29 of 30, speaking: 28 of 30, listening: 28 of 30, writing: 28 of 30, total score: 113)

French – Full Professional Proficiency (oral and written); DELF A1, A2, A3 and A4

Italian – Basic (oral and written), DELI-diploma