NICOLAS NAVARRE

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Edinburgh, Scotland

EDUCATION

University of Edinburgh — Edinburgh, Scotland *Sept 2023 - Current*
PhD in Natural Language Processing UKRI NLP CDT

Université de Paris Cité & ENS-PSL — Paris, France *Sept 2021 - Aug 2023*
Master of Cognitive Science Modeling & Linguistics

University of British Columbia — Vancouver, BC *Sept 2016 - May 2021*
Bachelor of Applied Science Engineering Physics

RESEARCH EXPERIENCE

Stanford University — Stanford, CA *June 2025 – Aug 2025*
Visiting Student Researcher, Supervised by Dr. Tobias Gerstenberg
Developing computational models of human **counterfactual reasoning**.

Institut Jean Nicod — Paris, France *Feb 2022 – Aug 2023*
Masters Researcher, Supervised by Dr. Salvador Mascarenhas
Developing computational models of **causal reasoning** and designing **psycholinguistic** experiments evaluating human reasoning under cognitive loads.

Institute of Intelligent Systems and Robotics (ISIR) — Paris, France *Sept 2021 – Jan 2022*
Masters Researcher, Supervised by Dr. Mehdi Khamassi
Modeling human curiosity with **reinforcement learning** and psychological studies.

UBC Visual Cognition Lab — Vancouver, BC *Sept 2020 – Aug 2021*
Research Assistant, Supervised by Dr. Madison Elliott and Dr. Ronald Rensink
Designing **psychophysics** experiments studying visual cognition.

WORK EXPERIENCE

Tesla — Palo Alto - Fremont, CA *May 2019 - Aug 2019*
Engineering Intern
Project planning, hardware selection and electrical schematic design for power electronic testing equipment. Developing test sequencing software for a manufacturing test machine. Created a test data visualization and interfacing platform for test operators.

National Research Council — Ottawa, ON - Iqualuit, NU *Jan 2018 - April 2019*
Engineering Intern
Characterizing and designing a control system for Heat Recovery Ventilator (HRV) in arctic conditions. Testing and characterizing sensory equipment. Implementing data analytic tools to monitor system. Construction and implementation of all mechanical and electrical equipment in a research cabin in Iqaluit, Nunavut.

PUBLICATIONS

Navarre, N.*, Pedersen, J.*, & Moore, A. (2025). Political Polarization and Fractionalisation from Rational Values-Based Inference in an Agent-Based Graph Network. Proceedings of the Annual Meeting of the Cognitive Science Society, 47. https://escholarship.org/uc/item/6gv6j71v

Carslaw, I.*, Milton, S.*, **Navarre, N.***, Qing, C. & Uegaki, W., (2025) Automatic Extraction of Clausal Embedding Based on Large-Scale English Text Data, Society for Computation in Linguistics 8(1): 12. doi: https://doi.org/10.7275/scil.3151

Navarre, N.*, Konuk, C.*, Bramley, N. R., & Mascarenhas, S. (2024). Functional Rule Inference from Causal Selection Explanations. Proceedings of the Annual Meeting of the Cognitive Science Society, 46. https://escholarship.org/uc/item/77s6z2

Konuk, C., **Navarre, N.**, & Mascarenhas, S. (2024). Effects of causal structure and evidential impact on probabilistic reasoning. Proceedings of the Annual Meeting of the Cognitive Science Society, 46.https://escholarship.org/uc/item/5g56p16z

Navarre, N., Farra, S., Hunjan, S. S. (2020). Synchronizing Sustainability Education Across Higher Education Community Orientations [R]. http://hdl.handle.net/2429/75496

REVIEWS

Journal of Machine Learning Research (2025); Annual Meeting of the Cognitive Science Society (2024, 2025); International Joint Conference on Learning & Reasoning (2024); Cognition (2024, 2025).
ORCiD: https://orcid.org/0009-0006-0943-7155

TEACHING

UoE Informatics — Edinburgh, UK *Sept 2025 - Dec 2025*
Tutor — Computational Cognitive Science (INFR10054)
Teaching tutorial sessions that run in parallel to course lectures.

UoE PPLS — Edinburgh, UK *Jan 2025 - April 2025*
Teaching Assistant — Causal Cognition (PSYL10160)
Assist in structure and design of the course material. Running Tutorial sessions that run in parallel to course lectures.

UoE PPLS — Edinburgh, UK *Sept 2024 - Dec 2024*
Lab Tutor — Introduction to Cognitive Science (PPLS08002)
Responsible for guiding programming lab sessions that run in parallel with the course lectures.

UBC Department of Mechanical Engineering — Vancouver, BC *Sept 2019 - May 2020*
Teaching Assistant — APSC 100/101
Teaching assistant for UBC's Introduction to engineering course. Assisted studio instructors to run sessions where students worked on projects related to the engineering design process: Designing, prototyping, rapid-testing, iterating, constructing.

UBC Physics and Astronomy *January 2019 - April 2019*
Teaching Assistant — PHYS 159
Introduction to physics lab techniques. Principles of physics experimentation and data analysis. Assisting students with using laboratory equipment such as function generators, multi-meters and oscilloscopes.

City of Calgary — Calgary, AB *June 2015 - Aug 2017*
Sailing Instructor
Teaching different levels of sailing from the basics to racing.

PROJECTS

École 42 — Paris, France *Oct 2022*
NeurotechX Hackathon Winner (Team Kiwi)
Using Timeflux library and Bitalino EEG technology to display a PCA decompsition of brain activity to play music. Won local selection for the Paris Hackathon: https://twitter.com/SCogLab/status/1589372472872562688 Project on Github.

ENS-PSL — Paris, France *Jan 2022 - May 2022*
Algorithms for NLP Final Project
An analysis and extension of https://arxiv.org/abs/2010.01878 of LSTM communication through a noisy channel. Project on Github.

ENS-PSL — Paris, France *Sept 2021 - Jan 2022*
Theoretical Neuroscience Final Project
An analysis and extension of https://arxiv.org/abs/2106.13031 on biologically plausible **Convolutional Neural Nets**. Project on github.

D-Wave, UBC — Vancouver, BC *Sept 2020 - May 2021*
Engineering Physics CAPSTONE Project II
Designing a **deGaussing** system to remove remnant magnetic fields of PCB's and electrical connectors using an electromagnetically induced magnetic field.

Osensa Innovations, UBC — Vancouver, BC *Jan 2020 - May 2020*
Engineering Physics CAPSTONE Project I
Investigating the receiver operator characteristics of an arc flash detection system. The system made use of Osensa's optical fiber temperature sensing technology to detect high luminance spikes from a camera flasher (simulating a high voltage arc flash).

UBC Sailbot — Vancouver, BC *May 2019*
Multidisciplinary Undergraduate Research Conference (MURC)
Poster presentation on the linearization of a non-linear dynamical for **model predictive control** of an autonomous sailboat
MURC 2019 Program Link

University of British Columbia — Vancouver, BC *May 2018 - Aug 2018*
Engineering Physics Robot Competition
Designed and fabricated an **autonomous robot** responsible for navigating a rigorous terrain course, picking up items and returning them for points. Robot Website Link

EXTRACURRICULAR

UKRI NLP CDT — Edinburgh, UK *Sept 2024 - Aug 2025*
Year Representative
Responsible for representing the NLP CDT cohort-23 student body.

Cognivence — Paris, France *Oct 2021 - Oct 2022*
External Relations Coordinator
Responsible of managing contacts between students and organizations beyond the student body. Responsible of contacting and scheduling speakers and technical presenters for Cognivence's annual Forum de Sciences Cognitives (FSC).

UBC Sailbot — Vancouver, BC *Jan 2017 - May 2020*
Controls Engineering Team
Designing a nonlinear Model Predictive Controller for an autonomous sailboat based on sailboat dynamics. Designing alternative controllers for robustness: Linearization of non-linear state space model, PID Control.

UBC Engineering Physics Student Association — Vancouver, BC *Sept 2017 - May 2021*
Class Representative — E-Week Representative — Podcast Host
I represented the Engineering Physics class of 2021 as co-representative since my entry into the program. Responsible for advocating for the student needs of fellow students and helping organizing community in events such as tutoring sessions, course feedback meetings, alumni night, and the Technical Career Fair. In 2019, I started to host the Engineering Physics podcast *Stutter Hour* to help share and promote the ideas and projects of fellow classmates. In 2020 I was also elected as the Engineering week (E-week) representative, responsible for planning and coordinating teams for the events held during E-week.

UBC Sailing Team — Vancouver, BC *Sept 2016 - May 2020*
Student Athlete — Fundraising Coordinator
I have trained and competed in sailing regattas representing UBC across multiple competitive conferences: North-Western Inter-collegiate Sailing Association (NWICSA), and Canadian Intercollegiate Sailing Association (CICSA). In 2017, I was elected as the fundraising coordinator to fund team travel.

PODCASTING

Stutter Hour (Engineering Physics Podcast)
Apple Podcasts Link
Spotify Link

- Episode 1: Global Catastrophe
- Episode 2: Psychology in Music
- Episode 4: Scientific Revolution ft. Andrew Cote
- Episode 5: Ancient Technologies ft. Tal Schwartz

- Episode 6: Scientific Outreach ft. Dominic Walliman
- Episode 7: A Look Into Our Community ft. Michael Ko
- Episode 8: Access to Education ft. Alex Gillis
- Episode 9: Understanding Quantum Mechanics and the Universe ft. Sean Carroll
- Episode 10: Open Source Medical Supplies Following a Global Pandemic ft. Emma Gray, Leigh Christie