Neil Scheidwasser-Clow

📞: +33647628722 | ✉: neilclow24@gmail.com | 🔗: linkedin.com/neil-scheidwasser | ⌂: https://neclow.github.io/

EXPERIENCE

Logitech   Lausanne, Switzerland
Scientific advisor   *Sep. 2021 –*
- Assisting interns for projects on deep-learning based speech representations

Engineering intern, CTO office   *Feb. 2021 – Aug. 2021*
- **Project:** Paralinguistic analysis of speech and non-speech audio signals
- Prepared software and submissions for INTERSPEECH and ICASSP
- Designed experiments to record speech under cognitive and physical load conditions

EPFL   Lausanne, Switzerland
Research engineer   *Feb. 2022 – Sep. 2022*
- Master enhancement internship at the Behavioral Genetics lab: extending the analysis of my Master's thesis for a publication
- Providing assistance in data science and signal processing for other projects (e.g., fiber photometry, kinematic analysis)

Student assistant   *2019 – 2022*
- 2021-2022: Applied data analysis (CS-401)
- 2019-2021: Analysis III (MATH-203)
- 2019-2021: Projects in Informatics (for SV) (CS-116)

EDUCATION

University of Copenhagen   Copenhagen, Denmark
PhD Fellow, Department of Public Health, Section of Epidemiology   *2022 –*

EPFL   Lausanne, Switzerland
MSc in Life Sciences Engineering (Distinction), Minor: Computational neurosciences   *2019 – 2022*
- **Relevant coursework:** Machine learning, Deep learning, Applied data analysis Controlling behavior in animals and robots, In silico neuroscience
- **Master's thesis:** *Analytical approaches to data from human virtual reality (VR) and neuro-physiology studies*

KTH Royal Institute of Technology   Stockholm, Sweden
Swiss European Mobility Programme – 3rd year Bachelor exchange   *2018 – 2019*

EPFL   Lausanne, Switzerland
BSc in Life Sciences Engineering   *2016 – 2019*

PROJECTS (SELECTED)

EPFL   Lausanne, Switzerland
Behavioral Genetics Lab   *Feb. 2021 – Sep. 2022*
- Design of a GUI to facilitate post-processing of data from DeepLabCut (kinematics) and fiber photometry for behavioral tests in rodents.

EPFL   Lausanne, Switzerland
Neuroengineering lab   *Sep. 2020 – Feb. 2021*
- Semester project – comparing different deep learning-based approaches (DeepFly3D, DeepLabCut) for 2D pose estimation of tethered *Drosophila* flies.

EPFL   Lausanne, Switzerland
Psychophysics lab   *Sep. 2019 – Feb. 2020*
- Semester project – investigating how different recurrent neural networks can explain a set of psychophysical results that involve visual grouping and segmentation across space and time.

Technical Skills

Operating systems: Windows, Linux
Office automation: LaTeX, Microsoft Office
Programming languages: Python, C++, Matlab, basic knowledge of R, Julia, and Ruby
Machine learning frameworks: PyTorch, Tensorflow, Keras, scikit-learn
Audio processing: Audacity
Image processing: ImageJ
GUI design: Tkinter

Languages

French, English: Native speaker
German: Limited working proficiency
Danish, Swedish, Mandarin Chinese: Elementary knowledge

Publications

BYOL-S: Learning Self-supervised Speech Representations by Bootstrapping
Elbanna, G., **Scheidwasser-Clow, N.**, Kegler, M., Beckmann, P., & Cernak, M.
HEAR: Holistic Evaluation of Audio Representations (NeurIPS 2021 Competition) **PMLR**, 2022.

Hybrid Handcrafted and Learnable Audio Representation for Analysis of Speech Under Cognitive and Physical Load,
Elbanna, G., Biryukov, A., **Scheidwasser-Clow, N.**, Orlandic, L., Mainar, P., Kegler, M., Beckmann, P. & Cernak, M.
Proceedings of the 23rd Interspeech conference **Interspeech**, 2022

SERAB: A multi-lingual benchmark for speech emotion recognition,
Scheidwasser-Clow, N., Kegler, M., Beckmann, P., & Cernak, M.
International Conference on Acoustics, Speech and Signal Processing **ICASSP**, 2022.

- Code: https://github.com/Neclow/SERAB

- Featured as one of the strongest submissions of the HEAR 2021 NeurIPS challenge.

Commentary: The Risky Closed Economy: A Holistic, Longitudinal Approach to Studying Fear and Anxiety in Rodents,
Scheidwasser-Clow, N., Faggella, M., Kozlova, E., & Sandi, C.
Frontiers in Behavioral Neuroscience, 2021

Preprints & upcoming publications

Efficient Speech Quality Assessment using Self-supervised Framewise Embeddings,
Hajal, K. E., Wu, Z., **Scheidwasser-Clow, N.**, Elbanna, G., & Cernak, M.
Under review at **ICASSP** 2023.

Other interests

Student organizations:

- **Data Analytics Group (DAG) at EPFL**: co-founder
  - ∗ Goal: build a strong community of students who share a passion for data science and artificial intelligence
  - ∗ 2022: Head of Communications
  - ∗ 2021: Head of Event Management
  - ∗ 2021-2022: designed 20+ coding challenges in Python (data science and basic algorithms)
- **Erasmus Student Network (ESN)**:
  - ∗ Copenhagen: commitee member (2022-)
  - ∗ Lausanne: commitee member (2020-2022)

Scrabble: Under-18 French World Scrabble Champion (2015), currently in World top-100
Sports: Football, running, skiing, bouldering, tennis, squash