

# Neil Scheidwasser

✉ [neil.clow@sund.ku.dk](mailto:neil.clow@sund.ku.dk)

🌐 [neclow.github.io](https://neclow.github.io)

in [linkedin.com/neil-scheidwasser](https://linkedin.com/neil-scheidwasser)

ID [orcid.org/0000-0001-9922-0289](https://orcid.org/0000-0001-9922-0289)



Engineer with a strong focus on data science and software development, currently working as a PhD Fellow at the University of Copenhagen. My research is concerned with applying machine learning to diverse areas of life science, including speech processing, neuroscience, and public health.

## Education

- 2022 – **Ph.D., University of Copenhagen** in Public Health and Epidemiology.  
Keywords: pandemic preparedness, phylogenetics, computer vision, bioinformatics  
Affiliated with **Imperial College London**
- 2019 – 2022 **M.Sc., EPFL** in Life Sciences Engineering (Distinction).  
Thesis title: *Analytical approaches to data from human virtual reality (VR) and neuro-physiology studies.*  
Minor: computational neuroscience

## Experience

- 2021 – 2023 **Scientific Advisor**, Logitech.  
Assisting interns for projects on deep-learning based speech representations
- Feb. 2022 – Sep. 2022 **Research assistant**, EPFL.  
Writing graphical user interfaces to facilitate animal tracking for biologists
- Feb. 2021 – Aug. 2021 **Engineering intern**, Logitech.  
Designing experiments and analysing deep learning techniques for emotion and stress recognition.

## Research Publications (selected)

Full list available on [Google Scholar](https://scholar.google.com/citations?user=neil.scheidwasser). \*: Equal contribution

### Journal Articles

- 1 Artificial intelligence for modelling infectious disease epidemics  
M. U. Kraemer, J. L.-H. Tsui, S. Y. Chang, S. Lytras, M. P. Khurana, S. Vanderslott, S. Bajaj, **N. Scheidwasser**, J. L. Curran-Sebastian, E. Semenova, *et al.*  
*Nature*, 2025
- 2 Phylo2Vec: a vector representation for binary trees  
M. J. Penn\*, **N. Scheidwasser**\*, M. P. Khurana, D. A. Duchêne, C. A. Donnelly, and S. Bhatt  
*Systematic Biology*, 2024

### Conference Proceedings

- 1 BYOL-S: Learning Self-supervised Speech Representations by Bootstrapping  
G. Elbanna, **N. Scheidwasser**, M. Kegler, P. Beckmann, K. El Hajal, and M. Cernak  
*HEAR: Holistic Evaluation of Audio Representations (NeurIPS 2021 Competition)*, 2022
- 2 SERAB: A multi-lingual benchmark for speech emotion recognition  
**N. Scheidwasser**, M. Kegler, P. Beckmann, and M. Cernak  
*IEEE international conference on acoustics, speech and signal processing (ICASSP)*, 2022

## Upcoming publications & preprints

- 1 Speech-based language phylogenies using deep learning-based language identifiers  
**N. Scheidwasser**, H. Zhu, H. Huang, S. J. Greenhill, S. Bhatt, and D. A. Duchêne  
In writing, 2025

## Skills

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Software development	Unit testing, CI/CD (GitHub actions), version control (Git)
Programming languages	Python (proficient), C++, Rust, Bash, Julia, R, Matlab, TeX (familiar).
Machine learning libraries	PyTorch, Jax, Tensorflow, Keras, scikit-learn
DataOps/MLOps	DVC, Great Expectations, Weights & Biases, MLFlow, FastAPI
Web development	Basic knowledge of Jekyll and Hugo
Misc.	Teaching (creator of PhD course <a href="#">Data visualisation and storytelling</a> ), supervision, consultation

## Other interests

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<a href="#">A Byte of Health</a>	A biweekly newsletter exploring the latest breakthroughs in science and medicine
Volunteering	Board member of <a href="#">ESN Copenhagen</a> (2023-2025), a student association supporting student exchanges in Europe Co-founder of <a href="#">Data Analytics Group at EPFL</a> (2020-2022), a student association promoting data science on campus
Scrabble	Under-18 French World Scrabble Champion (2015), in the world top-100 for 5 years
Other	Sports (running, bouldering, football, skiing...), chess, cooking, guitar