DANIEL R. McCLOY

206.890.0194 • dan@mccloy.info • https://dan.mccloy.info

OVERVIEW

I am a developer of open-source scientific software, and a scientist trained in acoustic phonetics, speech perception, and auditory neuroscience. My interest broadly centers on the perception and representation of speech sounds. I am also a certified Software Carpentry instructor.

Current position: Research Scientist at the University of Washington's Institute for Learning & Brain Sciences, where I lead the development of MNE-Python neuroscience analysis software, and occasionally analyze infant and adult magnetoencephalography (MEG) data.

ACADEMIC DEGREES

- PhD in Linguistics (UW, 2013): "Prosody, intelligibility and familiarity in speech perception" (PDF).
- MA in Linguistics (UW, 2009): "The semantics of implicitly relational predicates" (PDF).
- BS in Neurobiology, BA in Philosophy (UW, 2002).

OTHER EDUCATION

- Community Engagement Fundamentals (CSCCE, 2023).
- Postdoctoral training in psychophysics and auditory neuroscience (LABS^N, 2013-2018).
- Kavli Summer Institute in Cognitive Neuroscience (UC Santa Barbara, 2017).
- Machine Learning (Stanford University / Coursera, 2016).
- International Chinese Language Program (National Taiwan University, 2008).

TEACHING EXPERIENCE

- **Instructor**: Software Carpentry Workshops "The Unix shell", "Version control with git", "Programming with Python", "R for reproducible scientific analysis" (UW eScience Institute: 2016, 2017, 2018, 2019; Benaroya Research Institute: 2020; U. Minnesota: 2022, 2023).
- **Instructor**: Introduction to Phonetics (UW: 2010, 2011).
- **Teaching Assistant**: Introduction to Linguistics, four sections (UW: 2008–2009).
- **Co-instructor**: "New Majors" proseminar for incoming Philosophy students (UW: 2001, 2002).

TECHNICAL SKILLS

- **Programming**: Python, R, JavaScript, praat, Bash, GNU Make, Octave/MATLAB.
- **Scientific computing**: git/GitHub, cloud deployment, machine learning, data visualization.
- **Research hardware**: Pupillometry, eye tracking, EEG, MEG, microphones, audio processors.
- **Document generation**: Sphinx, Jupyter, Pandoc, Markdown, R Markdown, reStructuredText, LaTeX, Beamer, HTML, (S)CSS.

SOFTWARE & CORPORA

- **Leader (BDFL)** of MNE-Python: human neurophysiology analysis. (repo)
- **Maintainer** of PyData Sphinx Theme: theme for software documentation websites. (repo)
- **Co-creator** of PHOIBLE: a database of over 3000 phonological inventories. (repo)
- **Co-creator** of UW/NU Corpus: a 2-dialect, 20-talker corpus of 200 parallel sentences of English.
- **Co-creator** of expyfun: run psychophysics experiments in Python. (repo)
- **Creator** of phonR: analyze & visualize vowels in R. (repo | CRAN)
- **Creator** of "Praat Semi-Auto": scripts to streamline manual measurements in acoustic phonetics, when automated methods are not good enough. (repo)

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PEER-REVIEWED ARTICLES (14 TOTAL, 6 FIRST-AUTHORED)

Omitted here: 3 invited talks, 4 conference proceedings, 1 technical report, 14 conference presentations. Comprehensive BibTeX available here.

- Clarke, Larson, Peterson, **McCloy**, Bosseler & Taulu (2022). *Front. Neurol.* (DOI)
- Emmons, Lee, Estes, Dager, Larson, **McCloy**, St. John & Lau (2022). *J. Autism Dev. Disord.* (DOI | preprint)
- O'Brien, **McCloy** & Yeatman (2019). *J. Acoust. Soc. Am.* (DOI | preprint | repo)
- **McCloy** & Lee (2019). *Lang. Cogn. Neurosci.* (DOI | supplement | preprint | repo)
- **McCloy**, Larson & Lee (2018). *J. Acoust. Soc. Am.* (DOI | supplement | preprint | repo)
- O'Brien, **McCloy**, Kubota & Yeatman (2018). *Sci. Rep.* (DOI | preprint | repo)
- **McCloy**, Lau, Larson, Pratt & Lee (2017). *J. Acoust. Soc. Am.* (DOI | supplement | preprint | repo)
- Hasegawa-Johnson, Jyothi, **McCloy**, Mirbagheri, di Liberto, Das, Ekin, Liu, Manohar, Tang, Lalor, Chen, Hager, Kekona, Sloan & Lee (2017). *IEEE/ACM Trans. Audio, Speech, Lang. Process.* (DOI | preprint | repo)
- **McCloy**, Larson, Lau & Lee (2016). *J. Acoust. Soc. Am.* (DOI | preprint | repo)
- **McCloy** & Lee (2015). *J. Acoust. Soc. Am.* (DOI | preprint | repo)
- **McCloy**, Wright & Souza (2015). *Lang. Speech.* (DOI | preprint)
- Barrack, **McCloy** & Wright (2014). *Indogermanische Forschungen.* (DOI | preprint)
- Souza, Gehani, Wright & **McCloy** (2013). *J. Amer. Acad. Audiol.* (DOI | preprint)
- Moran, **McCloy** & Wright (2012). *Language.* (DOI | preprint | repo)

ACADEMIC SERVICE: PANELS, CONFERENCES & COMMITTEES

- **Review Panelist**: NSF POSE (2022).
- **Member**: LSA Committee on Scholarly Communication in Linguistics (2014–2018).
- **Session organizer**: "Quantitative Methodology in Physiological and Psychophysical Data Analysis," 171st Meeting of the Acoustical Society of America, Salt Lake City (2016).
- **Member**: LSA Technology Advisory Committee (2013–2014).
- **Conference chair**: 24th Northwest Linguistics Conference, Seattle (2008).
- **Referee**: LSA Annual meeting (2014, 2016), Northwest Linguistics Conference (2008, 2012).

ACADEMIC SERVICE: MENTORSHIP & OUTREACH

- **Organizer**: MNE-Python New Developers Code Sprint (2021, 2022) and Intermediate Training Sprint (2023).
- **Mentor**: 2 graduate students, 1 undergraduate, and 3 high school students (2011-2019).
- **Volunteer**: Pacific Science Center's Paws On Science Weekend (2016).

GRANTS, FELLOWSHIPS, AND AWARDS

- "Building Pediatric and Clinical Data Pipelines for MNE-Python", CZI Essential Open Source Software for Science (2021-2023).
- "Improving Usability of Core Neuroscience Analysis Tools with MNE-Python", CZI Essential Open Source Software for Science (2020-2021).
- Postdoctoral fellowship (NIH T32), UW Auditory Neuroscience Training Program (2016–2018).
- NIH LRP award (2014–2016).
- Postdoctoral fellowship (NIH T32), UW Department of Speech and Hearing Sciences (2013–2014).
- "Research Excellence Award," UW Department of Linguistics (2013).
- FLAS fellowship, Modern Standard Chinese, U.S. Department of Education (2007–2008).