

SARENNE WALLBRIDGE

Enthusiastic, creative PhD research student. Passionate about combining and augmenting human nature with information technology

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📍 Edinburgh, UK & Geneva, Switzerland in linkedin.com/in/sarennewallbridge/



EDUCATION

PhD; Institute of Language, Cognition, and Computation;
School of Informatics

University of Edinburgh

📅 September 2020 – 2023 (exp.) 📍 Edinburgh, UK

EPSRC-funded studentship: “*Leveraging Perceptual Salience for Compression: Speech as a Multi-Channel Communication System*”

- Invited talks at Trinity College, Dublin (12/2022), University of Amsterdam Computational Linguistics seminar (4/2023).
- Research visit at University of Amsterdam (4/2023 - 5/2023).
- Organiser for UKSpeech 2022.
- Organiser of weekly Prosody Group research meetings.
- Organising committee (2023) and panelist (2022) for Young Female Researchers in Speech, a satellite workshop at Interspeech.
- EUWiSTEM mentor (Edinburgh University Women in STEM).
- PGR representative for Athena Swan Assessment team to promote gender equality, and career development for women.

BSc (Hons) Cognitive Science; 1st Class
School of Informatics

University of Edinburgh

📅 September 2014 – July 2018 📍 Edinburgh, UK

Specialized in Natural Language Processing, Machine Learning, and AI.

- Thesis “Exploring the Relationship Between Word Form & Meaning” supervised by S. Goldwater received a 1st grade.
- Accepted to and completed a full set of MSc courses.

PUBLICATIONS

Quantifying the perceptual value of lexical and non-lexical channels in speech

Sarenne Wallbridge, Peter Bell, Catherine Lai

📅 August 2023; Interspeech 2023 (Dublin, Ireland)

Do dialogue representations align with perception? An empirical study

Sarenne Wallbridge, Peter Bell, Catherine Lai

📅 May 2023; EACL 2023 (Dubrovnik, Croatia)

Investigating perception of spoken dialogue acceptability through surprisal

Sarenne Wallbridge, Peter Bell, Catherine Lai

📅 June 2022; Interspeech 2022 (Incheon, Korea) **Awarded Best Student Paper**

It's not what you said, it's how you said it: discriminative perception of speech as a multichannel communication system

Sarenne Wallbridge, Peter Bell, Catherine Lai

📅 June 2021; Interspeech 2021 (Brno, Czech Republic)

FORMAL LANGUAGES & LIBRARIES

Python Git PyTorch UNIX
SciPy NLTK SpaCy TensorFlow
Sacred Chainer MATLAB AWS

NATURAL LANGUAGES

English
French



TEACHING

MSc programme Tutor

Spoken Language Processing MSc

📅 2020 – present 📍 University of Edinburgh

I developed and taught a series of lectures *Neural Networks from First Principles*. I also lead weekly office hours, seminars, and individual help for all programme courses.

MSc and BSc Tutor & Demonstrator

- Accelerated Natural Language Processing
- Processing Formal and Natural Languages
- Reasoning and Agents

📅 2017 – 2020 📍 University of Edinburgh

MOST PROUD OF



Creativity

Music has always been a major part of my life. I'm proud to have sung in Copenhagen's oldest Jazz club and put on my own show at the Edinburgh Fringe Festival.



Persistence

I love the wilderness and am happiest outdoors skiing, climbing, or hiking. I've climbed 14 >4000m peaks in the Alps (so far!) and walked Scotland's Cape Wrath trail.

Soft Skills

Articulate Organized Creative
Adaptable Team-player Persuasive

EXPERIENCE

PhD Industrial Collaboration

Novoic

📅 July 2020 – September 2020 📍 London, UK

Set up an industrial placement prior to starting my PhD: audio-linguistic embeddings for clinical applications.

Novoic leverages the information in human speech as a clinical tool for early detection of neurological and respiratory disease.

- Shipped new features in open-source acoustic feature extraction.
- Built API for clinical acoustic and lexical feature research.
- Designed and initialised collection of novel dataset (transcription guidelines, etc).

Machine Learning Research Engineer

Klydo

📅 September 2019 - July 2020 📍 London, UK

Klydo uses NLP to better understand consumers and drive creative innovation solutions.

- 6th hire!
- Contributed to full ML pipeline (supervised information extraction, semantic embedding, semi/unsupervised clustering)
- Involved in product development/commercialisation (including client meetings), ML-UX interaction, and project planning.

Machine Learning Engineer

Corti

📅 February - September 2019 📍 Copenhagen, Denmark

Corti augments critical conversations in emergency medical services using state-of-the-art ML to enhance dispatchers' decision-making.

I contributed to ML, NLP, and ASR research and product framework as both AGILE project owner and team member.

- Project lead; developed 1st iteration of dialog state tracking feature.
- Contributed to continuous development of multilingual ASR systems. Owned the French ASR development.
- Team member; launched a AI-EMS Triage product. Implemented a host of real-time ML models and contributed to UX design.
- Made significant changes to evaluation & training of time-series models through novel segmentation data augmentation.

Machine Learning Data Engineer

Corti

📅 October 2018 - February 2019 📍 Copenhagen, Denmark

- Analysis into multi-lingual ASR data augmentation, training patterns, and effects of spontaneous speech including source separation.
- Refactored components of ML research and production pipelines.

Edinburgh Fringe Festival: Music Director & Performer

The Blueswater

📅 August 2017 & 2018 & 2019 📍 Edinburgh, UK

I wrote, arranged, and co-fronted 'Good Morning, Billie!' (keyboard, vocals) and performed in headline 'Blues!' (vocals, guitar, narration).

- >75% of 'Good Morning, Billie!' performances sold out (a huge achievement for a new Fringe show running daily)!
- Performed in >50 gigs throughout the month.
- Personal mention in a review of 'Blues!' (Blues In Britain magazine).

Machine Learning Intern

Rasa

📅 June – Sept 2017 📍 Berlin, Germany

Rasa produces leading open-source conversational AI framework. After 2 months at Rasa's Berlin HQ, contract was extended remotely.

- NLU entity extraction methods (regex-based), released on GitHub.
- ML research into anomaly detection for out-of-scope messages.
- Set up a POC project for a new client (AGILE planning).
- Participated in client kick-off meetings, sat in on sales calls, and represented Rasa at events like the Berlin Chatbot Summit.

Undergraduate Research Assistant

University of Edinburgh

📅 May – July 2016 📍 Edinburgh, UK

Edinburgh University is the UK's oldest and largest Informatics research center.

- Assisted ESSENCE Taboo Project - an AI agent to play 'Taboo' against humans (player A describes a city without using 'taboo' words, player B guesses).
- Implemented a component to validate training data generation in real-time from human games.

VOLUNTEERING

Lender

Kiva

📅 2012 – ongoing

Kiva is an international non-profit that connects lenders to low-income entrepreneurs and students.

- Have made >40 loans - over \$1000

Performer

StreetWork UK, Edinburgh Children's Hospital

📅 2016 – ongoing 📍 Edinburgh

- Performed at Blue Christmas since its inception (6 years), a charity event for the Edinburgh Children's Hospital. Last year, we raised >£2'500.
- Performed 3 gigs with my own band; all proceeds went to Streetwork to help break the homelessness cycle.