

DOMINIKA WOSZCZYK

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I am a highly motivated and dedicated PhD student whose interests lie in generative technologies for Speech, NLP and their fusion. I'm passionate about using technology for social good and empowering minorities in tech!

EDUCATION

PhD in Computing

Imperial College London

📅 2019 - December 2024 📍 London, UK

- Topic: **Security & Speech Processing**. I work on Natural Language Processing, Speech Processing and Speech Generation methods for privacy-preserving applications, focusing on Dementia.
- Supervisor: Soteris Demetriou (APlications and Systems Security Lab)

MSc. Artificial Intelligence

University of Southampton

📅 2018-2019 📍 Southampton, UK

- Grade: Distinction
- Thesis: Robust Speech Recognition for Dysarthric Speech and Accented Speech. **Published at Interspeech 2020.**
- Modules include Deep Learning, Evolution of Complexity, Biometrics, Advanced Machine Learning, and Intelligent Agents.

BSc. Knowledge Engineering and Data Science

Maastricht University

📅 2015-2018 📍 Maastricht, The Netherlands

- Grade: 7.74
- Thesis: MaaSim, a Liveability Simulation For Improving The Quality Of Life In Cities. **Published at SoGood2018, ECMLPKDD.**
- Modules include Machine Learning, Robotics, Bioinformatics, Data Structures, Graph Theory, Linear Programming, Probability and Statistics.

WORK EXPERIENCE

Speech Algorithms Intern, Tencent

📅 June 2024 - December 2024 📍 London, UK

I work on neural audio codecs, audio compression and emotional and expressive language-model-based speech synthesis. My work is expected to end in a paper.

Teaching Assistant, Imperial College London

📅 2020 - Present 📍 London, UK

- Teaching assistant for the Advanced Security, Natural Language Processing and Introduction to Machine Learning courses.
- Developed coursework and lab on hate speech detection using Transformers and traditional models for a class of 300 students.

Applied Scientist Intern, Alexa Team, Amazon

📅 October 2021 - April 2022 📍 Cambridge, UK

Studied and implemented non-parallel Lombard speaking style transfer during voice conversion. The work resulted in a [paper](#) at a Interspeech 23' workshop, [Clarity Workshop 23'](#).

Data Scientist, PCKwadaat (VissQ), Maastricht University

📅 2016-2018 📍 Maastricht, The Netherlands

Two years Honours program "Ke@Work", worked in the innovation team on council data to create statistical models using machine learning.

SKILLS

- **Programming Languages:** Python, Pytorch, Java, R, Matlab, C, Prolog, PostgreSQL, HTML, CSS, LaTeX.
- **Languages:** French (mother tongue), Polish (mother tongue), English (fluent), Italian (intermediate), German (beginner).

PERSONAL PROJECT

Chatbot for language learning As part of my startup Minimal Viable Product (MVP), built a speech recognition system robust to one's accent as well as a grammar corrector, entity classifier, and dialogue management system. The end app was used for customer study and presented at the Future World's Dragon's Den.

AWARDS

Best Poster Award

📅 06.2022 📍 Imperial College London, UK

- Winner of the Late Stage Review poster competition and recipient of a total of 200 pounds.

Engineering in Business Fund recipient 2019

📅 08.2019 📍 Royal Academy of Engineering

- Recipient of a total of 1000 pounds.

Future world's Dragon's Den 2019

📅 11.05.2019 📍 University of Southampton

- Pitched at the University of Southampton's Dragon's Den Event.
- Received training from various business mentors and experts.

BrightSCIdeas Challenge Final 2019

📅 19.03.2019 📍 Society of Chemical Industry, UK

- Finalist team at the national science-based innovations pitch competition with an AI chatbot to help with mental health.

Honours+ program

📅 2016-2017 📍 Maastricht University, NL

- Program for students at the top of their studies.
- Interdisciplinary project: "Social Assistive Robots".
- Attended workshops for creative thinking and strength finding.

VOLUNTEERING

Founder of A Speech & Audio Reading Group(uscule) (ASPARaGus)

📅 2022 – Present

📍 Imperial College London, UK

Created a bi-weekly reading group of 10 PhDs and MScs to discuss papers and new developments in the domains of Speech and Audio processing including Text-to-Speech, Voice Conversion, and Representation Learning.

PhD Representative

📅 2020 – Present

📍 Imperial College London, UK

In charge of reporting to departmental student-staff meetings about student matters and co-organizing and hosting PhD activities and 6 [ICC bi-annual conferences](#).

Lecturer for GirlsWhoML

📅 2023

📍 Imperial College London, UK

Created and gave a lecture on the Transformers architecture as part of the GirlsWhoML Workshop series, introducing circa 50 non-computer science students to Machine Learning.

President of Women and Non-binary Individuals in Computing (WNBIC)

📅 2021 – 2023

📍 Imperial College London, UK

Managed the student committee, liaised with staff, organized and led student and research panels and industry talks. Co-created yearly mental health workshops and the GirlsWhoML Workshop series. Grew the society's Instagram followers 4 folds and secured 3 new sponsors. Established WNBIC's presence and influence among the PhD committee and activities. Link: <http://wic.doc.ic.ac.uk>.

Volunteer at>HelloWorld Hack 2023

📅 June 2023

📍 Imperial College London, UK

Mentored around 50 school girls aged 7-11 from 5 schools to build a game in Scratch as part of [HelloWorld Hack](#), a full day of coding activities to engage them with computer science and inspire them to pursue STEM careers.

TALKS

Invited Speaker @ Clarity Workshop 23', Interspeech 2023

📅 August 2023

📍 Dublin, IE

Gave a talk about the Lombard effect and intelligibility applications for Text-to-Speech.

Impostor Syndrome Workshop @ Bearing Point

📅 July 2023

📍 London, UK

Led and created a workshop on Impostor Syndrome and coping strategies for consultants from [BearingPoint](#).

Talk @ Machine Learning and Cyber Security Symposium, ICL

📅 June 2022

📍 London, UK

Gave a talk titled "Secrets your Voice Reveal" on privacy leakage in speech at the [Machine Learning and Cyber Security Symposium](#).

Lightning Talk @ 3rd Seminar for Computer Science Researchers

📅 June 2022

📍 Warsaw, PL

Presented my work at a research panel held at the [Perspektywy Women in Tech Summit 2022](#).

Speech and Privacy Workshop @ Women at Imperial Week

📅 March 2021

📍 London, UK

Led and created a workshop on speech processing and emotion classification, as well as how obfuscation can be performed and how to fool an emotion classifier.

SUPERVISION

MSc students

- Alban Tavolacci (2023).
- Anna Hlédiková (2021).
- Daria Galkina (2021).
- Alvin Lee (2019-2020).

Undergraduate students

- Jessica Wu, visiting UROP student from MIT. (2022)

OTHER PROJECTS

Sea Skipper License

- Passed the Sea Skipper License, after collecting 200 hours as crew on the sea and passing the theoretical and practical exam.

Dress-up Game

- Created a dress up game in Flash CS6 with my own drawings and music (when I was 16 years old).

PUBLICATIONS

Conference Proceedings

- Woszczyk, Dominika and Soteris Demetriou (2025). "DiDOTS: Knowledge Distillation from Large-Language-Models for Dementia Obfuscation in Transcribed Speech". In: *Accepted to Privacy Enhancing Technologies Symposium (PETS 2025 21% acceptance rate)*.
- Woszczyk, Dominika, Ranya Aloufi, and Soteris Demetriou (2024). "Prosody-Driven Privacy-Preserving Dementia Detection". In: *Interspeech 2024*, pp. 3035–3039. doi: [10.21437/Interspeech.2024-2137](https://doi.org/10.21437/Interspeech.2024-2137).
- Woszczyk, Dominika, Manuel Sam Ribeiro, et al. (2023). "Voice Conversion for Lombard Speaking Style with Implicit Acoustic Feature Conditioning." In: *Clarity Workshop, Interspeech 2023*.
- Woszczyk, Dominika, Anna Hedlikova, et al. (2022). "Data Augmentation for Dementia Detection in Spoken Language." In: *Proc. Interspeech 2022*, pp. 2858–2862. doi: [10.21437/Interspeech.2022-10210](https://doi.org/10.21437/Interspeech.2022-10210).
- Khan, Sojhal Ismail et al. (2021). "Characterizing Improper Input Validation Vulnerabilities of Mobile Crowdsourcing Services". In: *Annual Computer Security Applications Conference*, pp. 944–956. doi: [10.1145/3485832.3485888](https://doi.org/10.1145/3485832.3485888).
- Woszczyk, Dominika, Alvin Lee, and Soteris Demetriou (2021). "Open, Sesame! Introducing Access Control to Voice Services". In: *Proceedings of the 1st Workshop on Security and Privacy for Mobile AI*, pp. 7–12. doi: [10.1145/3469261.3469405](https://doi.org/10.1145/3469261.3469405).
- Woszczyk, Dominika, Stavros Petridis, and David Millard (2020). "Domain Adversarial Neural Networks for Dysarthric Speech Recognition". In: *Proc. Interspeech 2020*, pp. 3875–3879. doi: [10.21437/Interspeech.2020-2845](https://doi.org/10.21437/Interspeech.2020-2845).
- Woszczyk, Dominika and Gerasimos Spanakis (2018). "MaaSim: A Liveability Simulation for Improving the Quality of Life in Cities". In: *Joint European Conference on Machine Learning and Knowledge Discovery in Databases*. Springer, pp. 118–133. doi: [10.1007/978-3-030-13453-2_10](https://doi.org/10.1007/978-3-030-13453-2_10).