Sebastian Dziadzio

Experience

2019–2021 **Scientist, Microsoft Research, Mixed Reality & AI Lab** Cambridge, United Kingdom
I worked on a parametric 3D face model that powered multiple projects across the team. I built the training, evaluation, and visualization infrastructure, developed new features, fixed bugs, and lead a research effort that reduced the average fit error by half. I worked with PyTorch, TensorFlow, and NumPy.

2018–2019 **AI Resident, Microsoft Research** Cambridge, United Kingdom
I worked on deep generative models for novel view synthesis and on deep reinforcement learning for video games. Both projects involved formulating research questions, implementing and extending existing methods, and presenting the results at internal conferences. I used Pytorch, C#, and OpenCV.

2016–2018 **Data Scientist, Cliqz** Munich, Germany
I implemented an information retrieval model combining LSTM networks and CNNs. I also built a pipeline for collecting, processing, and visualizing telemetry data. I worked with Python, TensorFlow, and Spark.

2015–2016 **Software Engineer, Nokia Networks** Kraków, Poland
I was responsible for implementing new features for the LTE control plane, as well as designing unit tests, system component tests, and integration tests. I used C++ and Python.

Education

2022–2026 **PhD, Computer Science, University of Tübingen** Tübingen, Germany
I am a PhD student at the International Max Planck Research School for Intelligent Systems, working with Matthias Bethge and Tinne Tuytelaars in the ELLIS program. My main research interest is continual multimodal learning and evaluation. Anticipated graduation date: 02/26.

2014–2016 **MSc, Computer Science, AGH University** Kraków, Poland
Final grade: 5/5
Selected courses: machine learning, natural language processing, advanced algorithms and data structures, robotics, knowledge representation and reasoning.

2010–2014 **BEng, Acoustical Engineering, AGH University** Kraków, Poland
Final grade: 4.5/5
Selected courses: algebra, calculus, physics, digital signal processing, speech technology, object-oriented system design, image processing, cognitive robotics.

Publications

2025

ONEBench to Test Them All: Sample-Level Benchmarking Over Open-Ended Capabilities
Adhiraj Ghosh*, Sebastian Dziadzio*, Ameya Prabhu, Vishal Udandarao, Samuel Albanie, Matthias Bethge. *ACL 2025.*

How to Merge Your Multimodal Models Over Time?
Sebastian Dziadzio*, Vishaal Udandarao*, Karsten Roth*, Ameya Prabhu, Zeynep Akata, Samuel Albanie, Matthias Bethge. *CVPR 2025.*

2024

A Practitioner's Guide to Continual Multimodal Pretraining
Karsten Roth*, Vishaal Udandarao*, Sebastian Dziadzio, Ameya Prabhu, Mehdi Cherti, Oriol Vinyals, Olivier Hénaff, Samuel Albanie, Matthias Bethge, Zeynep Akata. *NeurIPS 2024.*

Infinite dSprites for Disentangled Continual Learning: Separating Memory Edits from Generalization
Sebastian Dziadzio, Çağatay Yıldız, Gido M. van de Ven, Tomasz Trzciński, Tinne Tuytelaars, Matthias Bethge. *CoLLAs 2024.*

2023

Controllable Image Generation
Marek Kowalski, Stephan Garbin, Matthew Johson, Tadas Baltrušaitis, Martin De La Gorce, Virginia Estellers, Sebastian Dziadzio. *US Patent US-11748932.*

Multiscale Neural Operators for Solving Time-Independent PDEs
Winfried Ripken, Lisa Coiffard, Felix Pieper, Sebastian Dziadzio. *NeurIPS 2023 Workshop on Deep Learning and Differential Equations.*

2022

Computing Photorealistic Versions of Synthetic Images
Stephan Garbin, Marek Kowalski, Matthew Johson, Tadas Baltrušaitis, Martin De La Gorce, Virginia Estellers, Sebastian Dziadzio, Jamie Shotton. *US Patent US-11354846.*

2021

Full-Body Motion from a Single Head-Mounted Device: Generating SMPL Poses from Partial Observations
Andrea Dittadi, Sebastian Dziadzio, Darren Cosker, Ben Lundell, Tom Cashman, Jamie Shotton. *ICCV 2021.*

Fake It Till You Make It: Face Analysis in the Wild Using Synthetic Data Alone
Tadas Baltrušaitis, Erroll Wood, Charlie Hewitt, Sebastian Dziadzio, Tom Cashman, Jamie Shotton. *ICCV 2021.*

Expertise

Programming
Python (PyTorch, TensorFlow, NumPy), C++

Knowledge
machine learning, continual multimodal learning, software development

Skills
public speaking, technical and scientific writing, agile project management

Languages
Polish (native), English (fluent), German (intermediate), Spanish (conversational)