

ONDREJ BOHDAL

✉ ondrej.bohdal@ed.ac.uk | 🏠 ondrejbohdal.github.io | 📄 ondrejbohdal | ✖ OBohdal | 📷 ondrejbohdal

EDUCATION

University of Edinburgh

PhD Data Science (Deep Learning)

Edinburgh, UK

Sep 2019 - Feb 2024

- Thesis: Meta-Learning Algorithms and Applications (advised by Prof. Timothy Hospedales)
- Significantly improved efficiency of meta-learning and also used it to enhance data efficiency and trustworthiness of deep learning
- Thesis examined by Prof. Frank Hutter and Dr. Siddharth Narayanaswamy
- Published 10+ papers on topics such as meta-learning, domain adaptation, data efficiency and uncertainty calibration
- Completed part of the studies at the Alan Turing Institute in London, UK

MSc(R) Data Science (Deep Learning) – *Distinction*

Sep 2018 - Sep 2019

- Thesis: Multi-Domain Meta-Learning (advised by Prof. Timothy Hospedales)

BSc (Hons) Artificial Intelligence and Mathematics – *First-Class Honours*

Sep 2015 - May 2018

- Thesis: Penalizing Confident Neural Networks (advised by Prof. Steve Renals)
- Received two prizes for top performance and entered directly into the second year

EXPERIENCE

University of Edinburgh

Postdoctoral Research Associate – supervised by Prof. Timothy Hospedales

Edinburgh, UK

May 2023 - Present

- Research in multimodal large language models, AI safety, fairness, uncertainty calibration and out-of-distribution generalization

Teaching Support Provider

Oct 2018 - May 2023

- Leading tutorial groups and lab sessions for two machine learning courses, marking coursework and exams

Cambridge Spark

Remote

Teaching Fellow

Jul 2020 - Present

- Content development, teaching and technical mentoring on various machine learning topics

Samsung AI Center

Cambridge, UK

Research Intern – hosted by Dr. Da Li

Nov 2021 - Apr 2022

- Developed three new fast domain adaptation methods, one published at WACV and two at workshops at ICLR and ECCV

Amazon Web Services

Berlin, Germany

Applied Scientist Intern – hosted by Dr. Giovanni Zappella

Jul 2021 - Oct 2021

- Developed a new highly-efficient hyperparameter optimization method, published at ICLR

Amazon

Edinburgh, UK

Software Development Engineer Intern

Apr 2018 - Aug 2018

- Worked on a data science project giving insights into how effectively ads are targeted

JPMorgan Chase & Co.

Glasgow, UK

Technology Summer Analyst

Jun 2017 - Aug 2017

- Implemented caching into an internal application and created a new data analytics page

Metaswitch (now part of Microsoft)

Edinburgh, UK

Software Engineering Intern

May 2016 - Aug 2016

- Created a web app integrating newly-developed machine learning tools for investigating customer problems

PUBLICATIONS

- Y. Zong*, O. Bohdal* (joint first authors), T. Hospedales. VL-ICL Bench: The Devil in the Details of Benchmarking Multimodal In-Context Learning. *Under review*, 2024
- Y. Zong, O. Bohdal, T. Yu, Y. Yang, T. Hospedales. Safety Fine-Tuning at (Almost) No Cost: A Baseline for Vision Large Language Models. *ICML*, 2024
- M. Ferienc*, O. Bohdal* (joint first authors), T. Hospedales, M. Rodrigues. Navigating Noise: A Study of How Noise Influences Generalisation and Calibration of Neural Networks. *TMLR*, 2024

- R. Dutt, O. Bohdal, S. A. Tsafaris, T. Hospedales. FairTune: Optimizing Parameter Efficient Fine Tuning for Fairness in Medical Image Analysis. *ICLR*, 2024
- O. Bohdal, D. Li, S. X. Hu, T. Hospedales. Feed-Forward Latent Domain Adaptation. *WACV*, 2024
- O. Bohdal, Y. Yang, T. Hospedales. Meta-Calibration: Learning of Model Calibration Using Differentiable Expected Calibration Error. *TMLR*, 2023
- O. Bohdal*, Y. Tian* (joint first authors), Y. Zong, R. Chavhan, D. Li, H. Gouk, Li Guo, T. Hospedales. Meta Omnium: A Benchmark for General-Purpose Learning-to-Learn. *CVPR*, 2023
- O. Bohdal, L. Balles, M. Wistuba, B. Ermis, C. Archambeau, G. Zappella. PASHA: Efficient HPO and NAS with Progressive Resource Allocation. *ICLR*, 2023
- O. Bohdal, D. Li, T. Hospedales. Label Calibration for Semantic Segmentation Under Domain Shift. *ICLR Workshop*, 2023
- O. Bohdal, T. Hospedales, P. H. S. Torr, F. Barez. Fairness in AI and Its Long-Term Implications on Society. *Stanford Existential Risks Conference*, 2023
- O. Bohdal, D. Li, T. Hospedales. Feed-Forward Source-Free Domain Adaptation via Class Prototypes. *ECCV Workshop*, 2022
- O. Bohdal, Y. Yang, T. Hospedales. EvoGrad: Efficient Gradient-Based Meta-Learning and Hyperparameter Optimization. *NeurIPS*, 2021
- R. Li, O. Bohdal, R. Mishra, H. Kim, D. Li, N. Lane, T. Hospedales. A Channel Coding Benchmark for Meta-Learning. *NeurIPS (Datasets and Benchmarks Track)*, 2021
- O. Bohdal, Y. Yang, T. Hospedales. Flexible Dataset Distillation: Learn Labels Instead of Images. *NeurIPS Workshop*, 2020

HONORS AND AWARDS

- Selected to attend the Doctoral Consortium – WACV conference 2024
- Top reviewer – NeurIPS conference 2023
- Selected to present at the tech seminar – Hyundai Vision Conference 2023
- Financial assistance award – ICLR conference 2023
- Enrichment Scheme placement award – the Alan Turing Institute 2021
- Second place at Algothon – financial machine learning hackathon 2019
- Participation at the Data Open Championship – organized by Citadel and Correlation One 2019
- First place at the Data Open – organized by Citadel and Correlation One 2018
- Howe Prize for top performance in UG₄ Artificial Intelligence 2018
- Class Prize for top performance in BSc (Hons) AI and Mathematics 2018
- Full scholarship from EPSRC for PhD & MSc(R) in Data Science at the University of Edinburgh 2018
- First place at Code for Good Intern Edition 2017
- Natural sciences scholarship – Jan Hus Educational Foundation 2015
- Represented Slovakia at the Middle European Mathematical Olympiad in Germany 2014

MISCELLANEOUS

Activities	Mentoring at GROWNi (since 2023), mini-conference organizer at EdIntelligence society (2019 - 2022), data study group facilitator at the Alan Turing Institute (2019)
Reviewing	Top machine learning and computer vision conferences (NeurIPS, ICML, ICLR, CVPR), IJCV journal and various workshops
Summer schools	MLSS'22, OxML'22, CIFAR DLRL'21, EEML'21, OxML'20
Invited talks	UCL ML reading group, Edinburgh vision group, Hyundai Vision Conference, Alan Turing Institute, G-Research ML bootcamp
Coding	Primarily working with Python, PyTorch, Jupyter and related ML/data science libraries, but also worked with Java, SQL, TensorFlow, Apache Spark, C++, HTML, Matlab, R and others
Courses	Studied various topics in AI and Mathematics, including deep learning, advanced machine learning, reinforcement learning, natural language processing, symbolic AI, probability, optimization and calculus
Languages	English (bilingual), Slovak (native), Czech (bilingual), German (intermediate)