

# DAN ANDREI ILIESCU

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## EDUCATION

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- University of Cambridge, UK** Oct 2019 - Dec 2022  
PhD Machine Learning and Data Science  
:: Full scholarship from the *Alan Turing Institute*, UK's national AI research institute.  
:: Developing generative models for disentanglement and missing data imputation (images, time-series).
- University of Cambridge, UK** Oct 2018 - Jul 2019  
MPhil Advanced Computer Science  
:: Starred distinction (+80%) in "*Machine Learning*" and "*Natural Language Processing*" courses.  
:: Dissertation on *representation learning* with *Variational Autoencoders*.
- University of Manchester, UK** Sep 2015 - Jul 2018  
BSc (Hons) Computer Science, *First-Class (1:1)*  
:: Dissertation on visualizing the internal layers of *Generative Adversarial Networks*.

## EXPERIENCE

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- Papercup Technologies, London, UK** June 2022 - Current  
Machine Learning Intern  
:: Developing deep learning models for controllable text-to-speech synthesis.
- University of Cambridge, UK** October 2019 - Current  
Teaching Assistant, *Department of Computer Science*  
:: Teaching "*Data Science*", "*Machine Learning & Bayesian Inference*" and "*Information Theory*" courses.
- Yokai.ai, Paris, France** May 2021 - Oct 2021  
Part-time Research Consultant  
:: Developed deep learning models for automatically assessing image quality.
- University of Manchester, UK** June 2018 - Sep 2018  
Research Assistant, *Machine Learning Group*  
:: Co-authored a [paper](#) on the trade-off between independence and specialization in neural network ensembles.
- ARM Ltd, Manchester, UK** June 2017 - Sep 2017  
Software Engineering Intern, *High-Performance Computing Group*  
:: Co-authored a [whitepaper](#) on optimizing ML operations for vectorized CPUs.

## PUBLICATIONS



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Topics: *deep learning, representation learning, disentanglement, causal inference, variational autoencoders, computer vision*

- Group Disentanglement Under Conditional Shift** 2022  
*D.A. Iliescu, D.J. Wischik* under review
- Training a Task-Specific Image Reconstruction Loss** 2022  
*A. Mustafa, A. Mikhailiuk, D.A. Iliescu, V. Babbar, R.K. Mantiuk* [WACV, 2022, pp. 2319-2328](#)
- Disentangling Domain and Content** 2020  
*D.A. Iliescu, A. Mikhailiuk, D.J. Wischik, R.K. Mantiuk* [arXiv:2202.07285](#)
- To Ensemble or Not Ensemble: When Does End-to-End Training Fail?** 2020  
*A. Webb, C. Reynolds, D.A. Iliescu, W. Chen, H. Reeve, M. Lujan, G. Brown* [ECML-PKDD, 2020, pp. 109-123](#)
- Arm Scalable Vector Extensions and Application to Machine Learning** 2018  
*D.A. Iliescu, F. Petrogalli* [ARM Ltd, whitepaper](#)

## PROJECTS

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- AI Mosaic**, Award at *St Edmund's College, Cambridge Art Contest* 2021  
Python algorithm for assembling images using patches from other images.  [/ai-painting](#)
- Computer Laboratory ML Reading Group**, University of Cambridge, UK 2019 - 2020  
Organized weekly ML paper presentations for PhD students in the Computer Lab.
- Visualizing GAN Layers**, Undergraduate Thesis 2018  
Plotting MNIST class information within GAN layers.  [/visualizing-GAN-layers](#)

## TOOLS

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- ML and Data Science:** Pytorch, Tensorflow, Scipy, Sklearn, Pandas, Plotly.  
**Development:** Git, Docker, Bash, Poetry, DVC.