

# Dan Andrei Iliescu

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## EDUCATION

- 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 *deep 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*.



## WORK EXPERIENCE

- University of Cambridge, UK** Oct 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  
:: Studied, implemented and evaluated deep learning methods for assessing the quality of human face images.
- University of Manchester, UK** Jun 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 Jun 2017 - Sep 2017  
Software Engineering Intern, *High-Performance Computing Group*  
:: Co-authored [a whitepaper](#) on optimizing ML operations for vectorized CPUs.

## PUBLICATIONS

- Group Disentanglement for Missing Data Imputation** 2022  
*D.A. Iliescu, D.J. Wischik* under review  
:: Topics: *representation learning*, *disentanglement*, *missing data imputation*, *causal inference*
- 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](#)  
:: Topics: *computer vision*, *image reconstruction*, *deep learning*, *perceptual loss function*
- Disentangling Domain and Content** 2020  
*D.A. Iliescu, A. Mikhailiuk, D.J. Wischik, R.K. Mantiuk* [arXiv:2202.07285](#)  
:: Topics: *variational autoencoder*, *disentanglement*, *unsupervised domain adaptation*, *image translation*
- 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](#)  
:: Topics: *ensemble neural networks*, *deep learning*, *generalized linear models*
- Arm Scalable Vector Extensions and Application to Machine Learning** 2018  
*D.A. Iliescu, F. Petrogalli* [ARM Ltd, whitepaper](#)  
:: Topics: *machine learning*, *matrix algebra*, *vectorized architectures*

## SELECTED PROJECTS

- 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](#)

## PROGRAMMING TOOLS

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