Yuki M. Asano

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EDUCATION

University of Oxford   Oxford, UK
DPhil in Autonomous Intelligent Machines and Systems; Visual Geometry Group (VGG)   *Oct. 2017 – Sep. 2021*
- Focus: Self-supervised learning, representation learning, multi-modal learning
  Supervisor: Andrea Vedaldi

University of Oxford   Oxford, UK
MSc Mathematical Modelling and Scientific Computing (overall: Pass)   *Oct. 2015 – Sep. 2016*
- Thesis: Low Dimensional Embedding of Technology Space and Implementation of a Variational Autoencoder for Patents (grade: Distiction), supervised by Doyne Farmer, written at Institute for New Economic Thinking

University of Hagen   Hagen, Germany
BSc Business Administration and Economics (overall: 1.4, GPA = 3.6/4)   *Oct. 2012 – Aug. 2017*
- Thesis: Social Learning in an Agent-Based Ramsey-Cass-Koopmans Model
  supervised by J. Heitzig, and A. Endres, written at Potsdam Institute for Climate Impact Research

Ludwig Maximilian University of Munich   Munich, Germany
BSc. Physics (overall: 1.2, GPA = 3.8/4)   *Oct. 2011 – Sep. 2014*
- Semester at the University of Tokyo (Oct. 2013 – Mar. 2014)
- Thesis: Monte-Carlo Study in Proton Computed Tomography (supervised by G. Dedes)

PUBLICATIONS

Support-set bottlenecks for video-text representation learning.
Mandela Patrick*, Po-Yao Huang*, Yuki M. Asano*, Florian Metze, A. Hauptmann, J. Henriques, and A. Vedaldi
arXiv: 2010.02824, 2020.

Multi-modal self-supervision from generalized data transformations
Mandela Patrick*, Yuki M. Asano*, Polina Kuznetsova, Ruth Fong, Joao F. Henriques, G. Zweig, and A. Vedaldi
arXiv: 2003.04298, 2020.

Labelling unlabelled videos from scratch with multi-modal self-supervision.
Yuki M. Asano*, Mandela Patrick*, Christian Rupprecht, and Andrea Vedaldi
Neural Information Processing Systems (NeurIPS), 2020

Self-labelling via simultaneous clustering and representation learning
Yuki M. Asano, Christian Rupprecht, and Andrea Vedaldi
International Conference on Learning Representations (ICLR) [Spotlight], 2020.

A critical analysis of self-supervision, or what we can learn from a single image
Yuki M. Asano, Christian Rupprecht, and Andrea Vedaldi
International Conference on Learning Representations (ICLR), 2020.

Rising adoption and retention of meat-free diets in online recipe data
Yuki M. Asano*, Gesa Biermann*
Nature Sustainability, 2(7):621–627, 2019

Emergent inequality and endogenous dynamics in a simple behavioral macroeconomic model
Yuki M. Asano and Jakob J Kolb and Jobst Heitzig and J Doyne Farmer
arXiv: 1907.02155, 2019.

Monte Carlo Study of the Precision and Accuracy of Proton CT Relative Stopping Power Maps
G. Dedes and Y. Asano and N. Arbor and D. Dauvergne and J. Letang and E. Testa and S. Rit and K. Parodi
Medical Physics, 3298-3298, 2015.

*Denotes joint first-authorship

Summer Research Intern
Jun. 2020 – Present

Facebook AI Research
Paris (remote)

- Research on Self-Supervised Learning applied to object detection with Armand Joulin & Ishan Misra

Machine Learning Intern & Contractor
Mar 2017 – Jan. 2019

TransferWise

As Contractor/Consultant
Dec. 2018 – Jan. 2019

- Implemented in-production forecasting software with Python and PostgreSQL
- Increased resolution from daily to quarter-hourly predictions for multiple currency pairs

As Intern
Mar 2017 – Jun. 2017

- Developed prediction engine combining multiple models for forecasting selected daily transfers worth >8M GBP

Cloud Infrastructure Engineering Intern
Aug. 2015 – Sep. 2015

Rakuten
Tokyo

- Open source development in Python: developed logging module for OpenStack Virtual machine statistics
- Learned Golang and worked on own open-source plugin for telegraf/InfluxDB

Working student
Apr. 2015 – Aug. 2015

Siements Technology Accelerator
Munich

- Developed strategy for transforming Siemens' photovoltaics simulation technology into a new business
- Co-developed repurpose-business models for existing technologies with senior engineers of Siemens

President & Founder/Project manager
Dec. 2016 – Jun. 2017

180 Degrees Consulting Munich e.V.
Munich

As President & Founder
Dec. 2016 – Jun. 2017

- Led founder team of 9 in starting and establishing the consultancy that exclusively works with NGOs
- Gained 10 new clients and various partner organizations
- Developed and implemented growth strategy and initiated nation-wide collaborations
- Selected 18 new student consultants and gave workshops (e.g. problem solving, impact measurement)

As Project manager
Mar 2017 – Jun. 2017

- Worked closely with CFO of major NGO as project lead on developing cost controlling tool for 100+ countries

Fellow Intern
Apr. 2015 – Aug. 2015

McKinsey & Company
Scandinavia & Russia

- Increased quality and speed by developing cogent process of tender pitches at major telecommunications company
- Co-developed and analyzed pricing levels for one specific service contract in close collaboration with the client

TEACHING

Teaching Assistant
1/18 – 03/18, Mathematics and Data Science for Development (Neave O'Cleary)

Practicals
10/19 – 01/19, Deep Learning and Machine Vision for AIMS cohort 2019 (Andrew Zisserman, Andrea Vedaldi)
10/19 – 12/19, Machine Learning at CS Dept. (Phil Blunsom, Ani Calinescu)

Certified Instructor workshops for the Nvidia Deep Learning Institute
3x Fundamentals of DL, at the University of Oxford Big-Data Institute and the Wellcome Centre for Human Genetics

Other Tutorials
01/2019 Introduction to (Deep) NLP at the Oxford Institute for New Economic Thinking
07/2018 Introduction to Machine Learning at Santa Fe Institute Complex Systems Summer School
07/2018 Introduction to CNNs and RNNs at Santa Fe Institute Complex Systems Summer School

Talks

05/2020 ICLR 2020 virtual talks: one spotlight, one poster
06/2019 Robotics and Autonomous Systems CDT Conference, Edinburgh
11/2018 EMNLP workshop on Noisy User-generated Text
03/2018 Networks seminar, Mathematical Institute, University of Oxford
01/2018 Balliol College interdisciplinary student seminar, University of Oxford
11/2017 Networks seminar, Mathematical Institute, University of Oxford
10/2017 Complexity Economics meeting, Institute for New Economic Thinking (Young Scholars)
08/2017 Transdisciplinary methods research group, Potsdam Institute for Climate Impact Research

Organization of workshops

08/2021 *The Future is Unsupervised* (10 days) Introductory workshop and project work organization for the German National Academic Foundation summer academy in Leysin, co-organized with C. Rupprecht
08/2020 Self-Supervised Learning – What is next? ECCV workshop, organized with C. Rupprecht, A. Joulin, A. Vedaldi

Other Academic Events

2019 Alan-Turing Institute Data Study group: Object detection for microscopic cell tracking for DSTL, London
International Computer Vision Summer School (ICVSS), Sicily
2018 Santa Fe Complex Systems Summer School, Santa Fe
2016 Alan-Turing Institute Data Study group: worked on multi-spectral with Syngenta, London

Awards and funding

2020 AWS Machine Learning Research Award (Co-PI with Christian Rupprecht and Andrea Vedaldi)
Qualcomm Innovation Fellowship Winner 2020 (PI)
2019 International Computer Vision Summer School: best team essay on assistive technology
2018 Edgell Sheppee Fund from Engineering Science Dept., Oxford
Balliol College Graduate Project Grant
2017 Full PhD funding by the Engineering and Physical Sciences Research Council, 1 successful EU applicant per year
Open Data Science Conference East Scholarship
2016 Brasenose College Annual Fund
2015 MSc bursary of the University of Oxford Mathematical Institute for promising applicants
National Academic Foundation study abroad scholarship for studying at Oxford
2014 Ministry of Science in Japan scholarship, awarded to <1% of international undergraduate students
DAAD, German Academic Exchange Service scholarship for studying at the University of Tokyo
National Academic Foundation scholarship, for outstanding academic achievement, awarded to <0.4% of students
2013 Max Weber scholarship (elite network Bavaria), awarded to <1% of Bavarian students
EliteAkademie scholarship (three 4 week trainings on leadership + 3 weeks in East Asia), <2% acceptance rate

Media/Research community

2020 Interviewed for the CTDS podcast
Community video analysis about our ICLR2020 paper (with approx. 5000views)
Community blogposts (1, 2) about our ICLR2020 paper

Other skills

Languages: German (native), Japanese (native), English (fluent, IELTS 8.5/9), French (basic)
Programming: Python [PyTorch, caffe, Keras, numpy, networkX, scikit-learn, pandas, joblib, matplotlib, ,..], Matlab, C++, R, PostgreSQL, MySQL
Other Tools: Git, AWS, SLURM, PyCharm, DataGrip