

DANIELA MASSICETI

21 Station Road
Cambridge, CB1 2FB, UK

Machine Learning Researcher
Microsoft Research Cambridge

daniela.massiceti@gmail.com
www.robots.ox.ac.uk/~daniela

EDUCATION & SELECTED AWARDS

- D.Phil Engineering Science (Machine Learning). University of Oxford, Pembroke College** 2015–2019
– Thesis: “*Computer Vision & Natural Language Processing for People with Vision Impairment*” (awarded, no corrections)
– *Examiners*: Prof. Andrew Zisserman, Prof. Kristen Grauman
– *Supervisors*: Prof. Philip H.S. Torr, Dr Stephen Hicks
– Bronze Engineering Award at [STEM4Britain](#) (awarded by UK Parliament House of Commons) 2018
– Winner of University of Oxford Tri-Innovate Competition (start-up pitch competition) 2017
- M.Sc Neuroscience (with distinction). University of Oxford, Pembroke College** 2014–2015
– With Prof. Rafal Bogacz – “*Modelling Parkinson’s Disease tremor with networks of weakly-coupled oscillators*”
– With Dr Stephen Hicks – “*Sonic Vision: 3D visual-to-audio mappings for non-sighted navigation*”
- B.Sc Engineering - Electrical & Computer (cum laude). University of Cape Town (UCT)** 2010–2014
– With Prof. Fred Nicolls – “*Occluded body pose estimation and reconstruction of bed-bound patients for hospital monitoring*”
– Siemens Prize (best final year thesis) and finalist in SAIEE National Student Project Competition (2013)
– Engineering Council of South Africa (ECSA) medal - top final year B.Sc(Eng) graduate (2013)
– Cape Town City Gold, Silver & Bronze medal (top 4th, 3rd & 2nd year student in Engineering faculty) (2013, 2012, 2011)
– Class medal (top 4th, 3rd & 2nd year student in Electrical & Computer Engineering) (2013, 2012, 2011)
– UCT Engineering Faculty Dean’s Merit List ($\geq 75\%$ average) (2010–2013)
– Golden Key International Honours Society (top academic 15% at UCT) (2010–2013)
– Rochester House (UCT residence) top 2nd year student and top overall student (2011)
- National Senior Certificate (IEB South Africa). Holy Rosary School, Johannesburg** 1996–2009
– Within Independent Examinations Board Top 50 Matriculants (top 5% in ≥ 6 subjects across South Africa) (2009)
– Deputy Head Girl and Dux Scholar at Holy Rosary School (2009)
– Holy Rosary School Honours (all-round academic, sporting and cultural excellence) (2009)
– Public Speaking & Academic full colours. Swimming & Service to the Community half colours (2008, 2009)

CURRENT POSITIONS

- Machine Learning Researcher. [Microsoft Research, Cambridge](#)** (Feb 2020–present)
– Research focus: machine learning, computer vision, meta-learning, technologies for blind and visually-impaired people.
– Manager: Dr Cecily Morrison - cecilym@microsoft.com
- Postdoctoral Research Fellow. St Edmund’s College, Cambridge** (Apr 2020–present)
– 2-year non-stipendiary research fellowship

PREVIOUS POSITIONS

- Machine Learning Intern, [Microsoft Research, Cambridge](#)** June-Dec 2019
– Developed machine learning models which learn to recognise objects after only seeing a few examples (low-shot recognition)
– Contact: Dr Cecily Morrison - cecilym@microsoft.com
- Machine Learning Intern, [OxSight Ltd](#)** Nov 2018
– Developed a machine learning model for predicting which images regions are salient for OxSight’s smart-spectacles
– Contact: Dr Stephen Hicks - stephen.hicks@oxsight.co.uk

Machine Learning Consultant, [London Vision Clinic](#)

May-July 2018

- Consulted on machine learning methods for automatic keratoconus prediction from retinal scans
- Contact: Dr Dan Reinstein - dzr@londonvisionclinic.com

Visiting Student, [Computer Vision Lab Dresden \(CVLD\)](#), Technische Universität Dresden

Apr 2015

- Compared methods for image-based camera relocalisation using random forests and neural networks
- The project resulted in a paper which was accepted and published in ICRA 2017
- Contact: Prof Carsten Rother - carsten.rother@iwr.uni-heidelberg.de

SCHOLARSHIPS & GRANTS

- Pembroke College SCR Senior Scholarship 2018-2019
- Facebook AI Research *ParLAI* Grant 2017–2019
- Winner of Tri-Innovate (University of Oxford innovation competition) 2017
- Skye Foundation Scholarship 2015–2019
- University of Oxford Engineering Science Departmental Scholarship 2015-2019
- Clarendon Fund Scholarship 2014-2015
- University of Cape Town Engineering Faculty Scholarship 2011–2013
- Klaus-Jurgen Bathe Scholarship 2012–2013
- University of Cape Town Engineering Faculty Entrance Scholarship 2010
- University of Cape Town Harry Allschwang Grant 2010
- *ItalDev* South African-Italian Bursary 2010

RESEARCH

Papers

- **Massiceti, D***, Kulharia, V, Dokania, PK, Siddharth, N and Torr, PHS, 2019. *A Revised Generative Evaluation of Visual Dialogue* [under review].
- **Massiceti, D***, Dokania, PK*, Siddharth, N* and Torr, PHS, 2018. *Visual Dialogue without Vision or Dialogue*. In 2018 Conference on Neural Information Processing Systems (NeurIPS) [Critiquing & Correcting Trends in ML Workshop].
- **Massiceti, D**, Siddharth, N, Dokania, PK and Torr, PHS, 2018. *FlipDial: A Generative Model for Two-Way Visual Dialogue*. In IEEE Conference on Computer Vision and Pattern Recognition (CVPR). (accepted as oral)
- **Massiceti, D**, Hicks, SL and van Rheede, JJ, 2018. *Stereosonic Vision: exploring visual-to-auditory sensory substitution mappings in an immersive virtual reality navigation paradigm*. PLOS ONE 13(7): e0199389.
- Hou, Q*, **Massiceti, D***, Dokania, PK, Wei, Y, Cheng, MM and Torr, PHS, 2017. *Bottom-up top-down cues for weakly-supervised semantic segmentation*. In 2017 International Conference on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR).
- **Massiceti, D**, Krull, A, Brachmann, E, Rother, C and Torr, PHS, 2017. *Random forests versus Neural Networks - What's best for camera localization?*. In 2017 IEEE International Conference on Robotics and Automation (ICRA).

Selected Presentations

- A Generative Model for Visual Dialogue, *OxBridge Women in Computer Science Conference* Mar 2018
- Teaching Computers to Chat, *ATOM Science Society* Aug 2017
- Seeing with Sound: Sensory Substitution for navigation and obstacle avoidance, *Oxford Vision Group* Oct 2015

Workshops & Short Courses

- Deep Learning Indaba, Kenyatta University, Kenya Aug, 2019
- Deep Learning Indaba, Stellenbosch University, South Africa Sept, 2018
- Google Computer Vision Ph.D Student Summit, Zurich Oct, 2016
- Machine Learning Summer School (MLSS), Cadiz, Spain May, 2015

- High Performance Signal Processing workshop for Square Kilometre Array (SKA), South Africa *Jan, 2013*
- Technical skills course at the Cape Peninsula University of Technology (CPUT) *Dec, 2010*

LEADERSHIP

Committee member of *Deep Learning Indaba* *2017-present*

- Organised Indaba 2018 & 2019, an annual machine learning summer school for African AI community
- Flagstone global event for promoting African inclusion in machine learning and artificial intelligence

Industry Officer of University of Oxford *Women in Computer Science* *2018–2019*

- Engagement with society's industry partners (including Google, DeepMind, Facebook, Bloomberg, Microsoft, and others)
- Coordination of termly office visits, technical talks, and coding and interview preparation workshops

Committee member of University of Oxford *Women in Engineering* *2016–2019*

- Coordinated 1st Women in Engineering Research Symposium, May 2018

President of Middle Common Room (MCR), Pembroke College *2017*

- Elected to represent a graduate body of 350 members
- Introduced per-student subsidies for welfare support, extra-curricular and academic activity
- Member of Pembroke College Governing Body Committee and Operations Group Committee

Treasurer and Vice President of Middle Common Room (MCR), Pembroke College *2015–2017*

- Managed an annual operating cash flow of £40,000-£50,000
- Acquired over £4000 in funding for MCR academic, sporting, cultural and social events
- Member of Pembroke College Finance & Planning Committee and Student Development Committee

EXTRA-CURRICULAR

Entrepreneurship

- Began a web-design company for business and personal website development *2013–present*
- Won start-up competition at University of Oxford with idea for an assistive tool for visually-impaired people *2017*

Sporting

- University of Oxford seconds swimming team *2016–2018*

Outreach

- Oxford Females in Engineering, Science and Technology (OxFEST) Mentorship Scheme (1 student) *2018–2019*
- Pembroke MCR/JCR Mentorship Scheme (4 students) *2016–2018*
- Volunteered 100+ hours at local orphanages, HIV/Aids homes and hospitals *2009–2013*
- Tutored high-school students from township (rural) schools in Cape Town in Mathematics, Biology and Physics *2013*

REFERENCES

Professor Philip H.S. Torr

philip.torr@eng.ox.ac.uk

+44 1865 283059

Professor in Engineering Science,
University of Oxford

Chief Scientific Advisor, FiveAI

Royal Academy of Engineering Fellow

Dr Stephen Hicks

stephen.hicks@oxsight.co.uk

+44 1865 234635

Research Fellow in Neuroscience
University of Oxford

CEO, Head of Innovation, OxSight

Professor Fred Nicolls

fred.nicolls@uct.ac.za

+27 21 650 2802

Associate Professor in Engineering,
University of Cape Town