Terence Broad

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EDUCATION

Goldsmiths, University of London London
PhD: Doctoral Training Centre for Intelligent Games and Games Intelligence *October 2018 - Present*

Goldsmiths, University of London London
Msci Creative Computing; Distinction *September 2012 - July 2016*

INDUSTRY EXPERIENCE

Vivacity Labs London
Machine Learning Research Engineer *August 2017 - October 2018*
- Responsible for managing large bespoke datasets, training models and benchmarking and evaluating new methods for edge device computer vision applications.
- Integrated Caffe2 into the entire C++ software stack, including testing/DevOps for all devices (TX1, TX2, Servers Docker integration) and deep integration into internal software library.

Vivacity Labs London
Software Engineer *October 2016 - July 2017*
- Worked in the software team building the bespoke C++ library for doing on-device machine learning and data processing for IoT traffic sensors.
- Worked on a number of bespoke projects for clients which involved working in small teams to design innovative solutions to a range of computer vision and IoT applications.
- Followed the Agile model and worked extensively with C++, OpenCV, caffe, darknet and Node.js.

Goldsmiths Digital London
Software Engineer *June 2016 - October 2016*
- Wrote an automatic CV scraping tool using Python and RegEx for the MyEcho jobs platform.

Wevolver London
Technical Writer *September 2014 - April 2015*
- Writing instruction manuals for open-source robotics projects for the Wevolver platform.

FutureDeluxe London
Creative Technologist - Intern *May 2014 - October 2014*
- Worked as a creative technologist at digital design studio FutureDeluxe where I worked on a number of bespoke software projects (such as advanced slitscanning) for clients inluding Converse and NVIDIA.

PUBLICATIONS

- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Amplifying The Uncanny** 8th Conference on Computation, Communication, Aesthetics & X (xCoAx), 2020.
- Terence Broad and Mick Grierson, **Searching for an *(un)stable equilibrium*: experiments in training generative models without data.** NeurIPS Workshop on Machine Learning for Creativity and Design 3.0, 2019.
- Terence Broad and Mick Grierson, **Transforming the output of GANs by fine-tuning them with features from different datasets.** Pre-print, 2019.
- Shaun Howell, Simon Cole, Terence Broad and Tommi Maatta, **IoT and Machine Learning for Next Generation Traffic Systems.** Transport Practitioners Meeting, 2018.
- Terence Broad and Mick Grierson, **Autoencoding Blade Runner: Reconstructing films with artificial neural networks.** SIGGRAPH '17 Art Papers, 2017.
- Terence Broad, **Autoencoding Video Frames.** Masters Thesis, Goldsmiths, University of London, 2016.
- Terence Broad and Mick Grierson, **Light Field Completion Using Focal Stack Propagation.** SIGGRAPH '16 Posters, 2016.

Accomplishments

- **Grand Prize** - ICCV Computer Vision Art Gallery, 2019.
- **Recognition of Outstanding Peer Review** - Leonardo, 2019.
- **Honourary Mention** - Prix Ars Electronica, 2017.
- **Best Masters Thesis** - Department of Computing, Goldsmiths, 2016.
- **Best Technical Work** - Goldsmiths Computing Innovation Awards, 2015.
- **Best Creative Work** - Goldsmiths Computing Innovation Awards, 2014.

Funding and Scholarships

- EPSRC Doctoral Studentship in Intelligent Games and Games Intelligence, 2018.
- Eliahou Dangoor Scholarship, 2012.

Teaching Experience

- Teaching Assistant for *Data and Machine Learning for Artist Practice* (Postgraduate), Spring Term 2020.
- Teaching Assistant for *Perception and Multimedia Computing: Graphics* (Undergraduate), Spring Term 2020.
- Teaching Assistant for *Data and Machine Learning for Creative Practice* (Undergraduate), Autumn Term 2019.
- Teaching Assistant for *Perception and Multimedia Computing* (Undergraduate), Autumn Term 2019.
- Teaching Assistant for *Creative Projects (C++)* (Undergraduate), Autumn Term 2019.

Professional Activities

- Visiting Academic, UAL Creative Computing Institute, 2019 - Present.
- Reviewer for Leonardo (MIT Press), 2019.
- Guest Judge, Science Fiction Hackathon, Goldmiths, University of London, 2018.
- Reviewer for IEEE Transactions on Image Processing, 2017.

Programming Skills

- **Languages**: Python, C, C++, C#, Javascript, Java, CUDA, LaTeX.
- **Technologies and Frameworks**: PyTorch, TensorFlow, OpenCV, OpenGL, Docker, NumPy, Sci-kit Learn.

Invited Talks

- *What is the best approach to learning representations of aesthetics?*, IGGI Conference, University of York, 2019.
- *Autoencoding Blade Runner*, SIGGRAPH '17 Art Papers, Los Angeles Convention Center, 2017.
- *Autoencoding Blade Runner*, Cambridge Coding Academy, London, 2016.
- *Autoencoding Blade Runner*, RE WORK Deep Learning Summit, London.
- *Autoencoding Blade Runner*, CreativeAI Meetup #1, Google Campus London.