Terence Broad

LinkedIn — Github terencebroad.com

EDUCATION

Goldsmiths, University of London

London

PhD: Computer Science; Topic: Manipulating Deep Generative Models

October 2018 - Present

Email: t.broad@arts.ac.uk

o Supervisors: Professor Mick Grierson, Professor Frederic Fol Leymarie.

Goldsmiths, University of London

London

MSci Creative Computing; Distinction

September 2012 - July 2016

EXPERIENCE

UAL Creative Computing Institute

London

Senior Lecturer

September 2022 - Present

- Senior Lecturer teaching primarily postgraduate courses relating to AI, data science, programming and mathematical foundations and creative practices for working with AI.
- Acting course leader for the MSc Data Science and AI for the Creative Industries programmes (in-person and online) between January and April 2023 to cover parental leave absence.

Freelance Remote

AI & ML Consultant

September 2021 - Present

• Freelance machine learning consultant, working on various projects including using AI to curate an exhibition for the Zurich Design Museum and using AI to generate audio and visuals for Warp Records.

UAL Creative Computing Institute

London

Associate Lecturer

January 2022 - August 2022

• Associate lecturer at the Creative Computing Institute at the University of The Arts London. Teaching machine learning, research methods and supervising dissertation projects on the MSc and MRes programmes in Creative Computing.

Vivacity Labs London

Research Scientist

October 2017 - October 2018

• Responsible for managing large bespoke datasets, training models and benchmarking and evaluating new methods and frameworks for low power IoT computer vision applications in the smart city sector.

Vivacity Labs London

Machine Learning Engineer

October 2016 - October 2017

• Worked in the software team that built the bespoke C++ library for doing on-device machine learning and data processing for IoT traffic sensors.

Goldsmiths Digital London

Software Engineer

June 2016 - October 2016

• Developed an automatic CV scraping tool using Python and RegEx for the MyEcho jobs platform.

Wevolver London

Technical Writer

November 2014 - May 2015

• Writing instruction manuals for open-source robotics projects for the Wevolver platform.

FutureDeluxe

Creative Technologist Intern

May 2014 - October 2014

London

• Creative technologist internship at the digital design studio FutureDeluxe where I worked on a number of bespoke software projects for the advertising campaigns of clients including Converse and NVIDIA.

Journal Articles

- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Network Bending: Expressive Manipulation of Generative Models in Multiple Domains.** Entropy, 24(1), 2022.
- Terence Broad and Mick Grierson, Autoencoding Blade Runner: Reconstructing films with artificial neural networks. Leonardo, 50(4), 2017.

Conference & Workshop Proceedings

- Marissa Beaty and Terence Broad, Envisioning Distant Worlds: Training a Latent Diffusion Model on NASA's Exoplanet Data. NeurIPS Workshop on Machine Learning for Creativity and Design, 2023. (Oral presentation)
- Junichi Shimizu, Ireti Olowe, Terence Broad, Gabriel Vigliensoni, Prashanth Thattai and Rebecca Fiebrink Interactive Machine Learning for Generative Models. NeurIPS Workshop on Machine Learning for Creativity and Design, 2023.
- Terence Broad, Sebastian Berns, Simon Colton and Mick Grierson, **Active Divergence with Generative Deep Learning A Survey and Taxonomy.** Proceedings of the Twelfth International Conference on Computational Creativity (ICCC), 2021. (Oral presentation)
- Sebastian Berns, Simon Colton, Christian Gucklesburger and Terence Broad, Automating Generative Deep Learning for Artistic Purposes: Challenges and Opportunities. Proceedings of the Twelfth International Conference on Computational Creativity (ICCC), 2021.
- Terence Broad, Frederic Fol Leymarie and Mick Grierson, Network Bending: Expressive Manipulation of Deep Generative Models. Proceedings of the 10th International Conference on Artificial Intelligence in Music, Sound, Art and Design (EvoMUSART), 2021. (Oral presentation)
- Terence Broad, Frederic Fol Leymarie and Mick Grierson, **Amplifying The Uncanny.** Proceedings of the 8th Conference on Computation, Communication, Aesthetics & X (xCoAx), 2020. (Oral presentation)
- 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, 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, Light Field Completion Using Focal Stack Propagation. SIGGRAPH '16 Posters, 2016.

Academic Theses

- Autoencoding Video Frames. Masters Thesis, Goldsmiths, University of London, 2016.
- Light Field Completion Using Focal Stack Propagation. Undergraduate Thesis, Goldsmiths, University of London, 2015.

Pre-prints

• Terence Broad and Mick Grierson, Transforming the output of GANs by fine-tuning them with features from different datasets. arXiv:1910.02411, 2019.

Workshops, Tutorials and Courses

- MOOC course creator, Creative AI: Sound, Music and Interaction, FutureLearn, 2024 (forthcoming).
- MOOC course creator, Creative AI: Art and images, FutureLearn, 2024 (forthcoming).
- MOOC course creator, Creative AI: Text and Transformations, Future Learn, 2024 (forthcoming).
- MOOC course creator, *Introduction to Creative AI*, FutureLearn, 2024 (forthcoming).
- Workshop organizer, Making datasets for Generative AI, BA Computational Arts, Camberwell College of Art, 2022.
- Tutorial organizer, A Deep Dive into Latent Space: Image Generation and Manipulation with StyleGAN2, International Conference on Computational Creativity (ICCC) 2020.

AWARDS AND HONOURS

- Nomination for Outstanding Support Award UAL Students Union Arts Awards, 2023.
- 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.

Professional Activities

- Art Papers Juror, ACM SIGGRAPH, 2024.
- Art Gallery Juror, NeurIPS Creativity Workshop Art Gallery, 2023.
- Art Papers Juror, ACM SIGGRAPH, 2023.
- Art Gallery Juror, NeurIPS Creativity Workshop Art Gallery, 2022.
- Reviewer for International Journal of Electrical and Computer Engineering, 2022.
- Art Papers Juror, ACM SIGGRAPH, 2021.
- Organising Committee, IGGI Conference, 2020.
- Ad hoc reviewer for Leonardo, 2019 Present.
- Visiting Researcher, UAL Creative Computing Institute, 2019 2022.
- Guest Judge, Science Fiction Hackathon, Goldsmiths, University of London, 2018.
- Reviewer for IEEE Transactions on Image Processing, 2017.

TEACHING EXPERIENCE

- Unit Lead for Data Science in the Creative Industries, UAL CCI (PG), Summer Term 2024.
- Unit Lead for AI for Media, UAL CCI (PG), Spring Term 2024.
- Unit Lead for Natural Language Processing for the Creative Industries, UAL CCI (PG), Autumn Term 2023.
- Lecturer for Data Science for the Creative Industries, UAL CCI (PG), Summer Term 2023.
- Lecturer for Personalisation and Machine Learning, UAL CCI (PG), Summer Term 2023.
- Lecturer for Introduction to Data Science, UAL CCI (PG), Spring Term 2023.
- Lecturer for AI for Media, UAL CCI (PG), Spring Term 2023.
- Lecturer for NLP for the Creative Industries, UAL CCI (PG), Autumn Term 2022.
- Lecturer for STEM for Creatives, UAL CCI (PG), Autumn Term 2022.
- Lecturer for Coding 3: Exploring Machine Intelligence, UAL CCI (PG), Summer Term 2022.
- Guest Lecturer for Critical Studies, UAL CCI (PG), Spring Term 2022.
- Lecturer for Research Design and Experimental Data, UAL CCI (PG), Spring Term 2022.
- Teaching Assistant for Neural Networks, Goldsmiths (UG), Spring Term 2021.
- Teaching Assistant for Software Projects (Year 1), Goldsmiths (UG), Spring Term 2021.
- Teaching Assistant for *Introduction to Programming*, Goldsmiths (UG), Autumn Term 2020.
- Teaching Assistant for Front End Web Development, Goldsmiths (UG), Autumn Term 2020.
- Teaching Assistant for Data and Machine Learning for Artist Practice, Goldsmiths (PG), Spring Term 2020.
- Teaching Assistant for Perception and Multimedia Computing: Graphics, Goldsmiths (UG), Spring Term 2020.
- Teaching Assistant for Data and Machine Learning for Creative Practice, Goldsmiths (UG), Autumn Term 2019.
- Teaching Assistant for Perception and Multimedia Computing, Goldsmiths (UG), Autumn Term 2019.
- Teaching Assistant for Creative Projects (Year 2), Goldsmiths (UG), Autumn Term 2019.

INVITED TALKS

- Artful Intrusions, Misleading Images Seminar, National Studio of Contemporary Art, Fresnoy, 2023.
- The next generation of Creative AI, Creative AI Research Conference, University for the Creative Arts, Online, 2023.
- Artist talk, BA Fine Art Perspectives Programme, Camberwell College of Art, London, 2022.
- Beyond Imitation, Goldsmiths, University of London, 2022.
- Beyond Imitation, UAL Creative Computing Institute, 2021.
- Beyond Imitation, SIGGRAPH SPARKS, Online, 2021.
- Active Divergence with Generative Deep Learning, ICCC'21, Mexico City Online, 2021.
- Artist talk, the depot_, London, 2021.
- Network Bending: Expressive Manipulation of Deep Generative Models, EvoStar, Seville Online, 2021.
- $\bullet \;\; Amplifying \; The \; Uncanny, xCoAx, Graz Online, 2020.$
- 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, 2016.
- Autoencoding Blade Runner, CreativeAI Meetup #1, Google Campus London, 2016.

SCREENINGS

- Besides The Screen: Graphic Intelligences & Algorithmic Fictions, Museum of Image and Sound, São Paulo, 2019.
- Impakt Festival, Impakt Center, Utrecht, 2018.
- Its origins are indeterminate, Whitechapel Gallery, London, 2018.
- Ars Electronica Animation Festival, Ars Electronica Center, Linz, 2017.
- Dreamlands: Immersive Cinema and Art Film Program, Whitney Museum of American Art, New York, 2017.
- Pluk De Nacht, Amsterdam, 2016.
- PANDO@EnclaveLab, Enclave Gallery, London, 2016.

SELECTED EXHIBITIONS

- Creative Machine Oxford, Jesus College, Oxford, 2023.
- FILE Festival, Fiesp Cultural Center, São Paulo, 2022.
- Creative Machine, Goldsmiths College, London, 2022.
- Reflections in the Water, Feral File, Online, 2021.
- the depot_ digs, the depot_, London, 2021.
- NeurIPS AI Art Gallery, Vanctouver Convention Center Online, 2020.
- thereafter.hiatus, one gee in fog, Geneva, 2020.
- CCI Inaugural Exhibition, Camberwell College of Art, London, 2020.
- NeurIPS AI Art Gallery, Vancouver Convention Center, Vancouver, 2019.
- ICCV Computer Vision Art Gallery, COEX Convention Center, Seoul, 2019.
- Science Fiction A Journey into the Unknown, Kunsthal, Rotterdam, 2019.
- Into the Unknown, Brandts Museum of Art & Visual Culture, Odense, 2018-19.
- IAM, Garage Museum of Contemporary Art, Moscow, 2018.
- Counting The Waves, Bard Hessel Museum, New York, 2018.
- Science Fiction: A Journey into the Unknown, Onassis Cultural Centre, Athens, 2017-18.
- All these Moments will be lost in Time like Tears in Rain, FMAC, Geneva, 2017.
- Ars Electronica Festival, Ars Electronica, Linz, 2017.
- Into the Unknown: A Journey through Science Fiction, The Barbican, London, 2017.
- Why Future Still Needs Us: AI and Humanity, Art Center Nabi, Seoul, 2016.
- Robot Vision Party, The Photographers Gallery, London, 2016.
- Dreamlands: Immersive Cinema and Art, 1905–2016, Whitney Museum of American Art, New York 2016-17.

Collections

• Blade Runner - Autoencoded, The Contemporary Art Collection of the City of Geneva, Acquired 2018.

Broadcast Media Coverage

- CBC Radio, CBC Spark: An Artificial Intelligence remade Blade Runner, 2016.
- Sky News, The emerging world of AI art, 2016.

Printed Press Coverage

- The State of the (CHI)Art, Miriam Sturdee, Makayla Lewis and Mafalda Gamboa, 2023 (forthcoming).
- Discorrelated Images, Shane Denson, Duke University Press, 2020.
- Slightly Slipping on a Banana Skin, Stéphane Cecconi, FMAC, 2018.
- Into The Unknown: A Journey Through Science Fiction, Laura Clarke and Patrick Gyger, Barbican International Enterprises, 2017.
- AI: The Other I, Gerfried Stocker, Christine Shöpf, Hannes Leopoldseder, Hatje Cantz Verlag, 2017.
- CyberArts 2017, Gerfried Stocker, Christine Shöpf, Hannes Leopoldseder, Hatje Cantz Verlag, 2017.
- The New York Times, Diving Into Movie Palaces of the Mind at the Whitney, 2016.
- The Wall Street Journal, At the Whitney, a Different Take on the Moving Image, 2016.
- Dreamlands: Immersive Cinema and Art 1905-2016, Chrissie Isles, Yale University Press, 2016.

DIGITAL MEDIA COVERAGE

- London Evening Standard, The Leader Podcast: Would you buy AI art for your home?, 2023.
- Eye Magazine, Graphic design live #10, 2023.
- Wüst und Wüst Magazine, Haettenschweiler: a Swiss master of typography., 2022.
- New Scientist, This science fiction trip is delightful, confusing and risky, 2017.
- The Independent, Blade Runner, Autoencoded: The strange film that sums up our fears of AI and the future, 2017.
- Motherboard, The Neural Net That Recreated 'Blade Runner' Has the Movie Stuck in Its Memory, 2017.
- AQNB, The future is only an extension of our past: BB9 + beyond, 2016.
- Vox, A guy trained a machine to "watch" Blade Runner. Then things got seriously sci-fi., 2016.
- TechCrunch, Oculus Hack Uses Cameras And Music To Mess With Your Perception., 2014.