Tianhong Dai

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Github: https://github.com/TianhongDai

EDUCATION

Imperial College London   London, United Kingdom
- *Ph.D in Deep Reinforcement Learning - Biologically Inspired Computer Vision Group (BICV)*   *Oct 2017 - April 2022*
  Thesis Title: Exploration in Deep Reinforcement Learning

Imperial College London   London, United Kingdom
- *MSc in Communication and Signal Processing (Merit)*   *Oct 2015 - Sep 2016*
  Thesis Title: Human Detection and Identification Using RGB and Depth Images

University of Liverpool   Liverpool, United Kingdom
- *BEng in Electronic and Communication Engineering (First Class)*   *Oct 2013 - Jun 2015*
  Thesis Title: Design and Implementation of FPGA-based Fourier Synthesizer Kit

Xi'an Jiaotong Liverpool University   Suzhou, China
- *BEng in Electronic and Communication Engineering*   *Sep 2011 - Jun 2013*

ONLINE COURSE

- **Data Structures and Algorithms (Udacity)**   Dec 2019

WORKING EXPERIENCE AND ACTIVITIES

- **Tencent AI Lab / Robotics X**   Shenzhen, China
  Research Intern in Deep Reinforcement Learning   *Mar 2019 - Sep 2019*
- **Alan Turing Institute**   London, United Kingdom
  Invited to give a Tutorial on Pytorch   *August 2018*
- **Perkins Shibaura Engines (Wuxi) Co., Ltd**   Wuxi, China
  Engineering Intern   *July 2014 - August 2014*

ACADEMIC PROJECTS

- **Hand Pose Estimation for Medical Diagnosis**   May 2018
- **Deep Reinforcement learning for Robotic Arm Control**   May 2018
- **Deep Reinforcement Learning for Axon Tracking**   Feb 2018
- **Human Detection and Identification using RGB and Depth Images**   Feb 2016
- **Design and Implementation of FPGA-based Fourier Synthesizer Kit**   Sep 2014

SKILLS SUMMARY

- **Programming Languages**: C, C++, Python, Verilog HDL, SQL, Matlab, HTML
- **Tools/Frameworks**: Pytorch, Tensorflow, OpenCV, Docker, Git, Latex

PUBLICATIONS

[1] Shafa Balaram, Kai Arulkumarana, Tianhong Dai, and Anil Anthony Bharath. A maximum entropy deep reinforcement learning neural tracker. In *International Workshop on Machine Learning in Medical Imaging*, 2019.

[2] Cher Bass, Tianhong Dai, Benjamin Billot, Kai Arulkumaran, Antonia Creswell, Claudia Clopath, Vincenzo De Paola, and Anil Anthony Bharath. Image synthesis with a convolutional capsule generative adversarial network. In *The 2nd International Conference on Medical Imaging with Deep Learning*, 2019.

[3] Tianhong Dai, Kai Arulkumaran, Samyakh Tukra, Feryal Behbahani, and Anil Anthony Bharath. Analysing deep reinforcement learning agents trained with domain randomisation. *arXiv preprint arXiv:1912.08324*, 2019.

[4] Tianhong Dai, Magda Dubois, Kai Arulkumaran, Jonathan Campbell, Cher Bass, Benjamin Billot, Fatmatulzehra Uslu, Vincenzo de Paola, Claudia Clopath, and Anil Anthony Bharath. Deep reinforcement learning for subpixel neural tracking. In *The 2nd International Conference on Medical Imaging with Deep Learning*, 2019.

[5] Yali Du, Lei Han, Meng Fang, Ji Liu, Tianhong Dai, and Dacheng Tao. Liir: Learning individual intrinsic reward in multi-agent reinforcement learning. In *Advances in Neural Information Processing Systems 33*. 2019.

[6] Tianrui Liu, Jun-Jie Huang, Tianhong Dai, Guangyu Ren, and Tania Stathaki. Gated multi-layer convolutional feature extraction network for robust pedestrian detection. *arXiv preprint arXiv:1910.11761*, 2019.