PEILUN DAI

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EDUCATION

Boston University, Boston, MA, USA 9/2018 - Present
PhD Candidate in Computer Science
Advisor: Prof. Sang "Peter" Chin
Department of Computer Science & Graduate School of Arts and Sciences

Massachusetts Institute of Technology, Cambridge, MA, USA 9/2015 - 9/2018
Master of Science in Brain and Cognitive Sciences
Advisor: Prof. Edward S. Boyden
Department of Brain and Cognitive Sciences

Nanyang Technological University, Singapore 9/2010 - 5/2014
Bachelor of Engineering (1st Class Hons) in Electrical and Electronic Engineering
Final Year Project supervisor: Prof. Gang Wang
School of Electrical and Electronic Engineering

WORK

MIT Media Lab, Cambridge, MA, USA 9/2016 - 9/2018
Graduate Research Assistant, Synthetic Neurobiology Group

Optical connectomics theory, zebrafish behavior

Institute for Infocomm Research, Singapore 8/2014 - 7/2015
Research Engineer

Project title: "Reverse Engineering Visual Intelligence for cognitiVe, Enhancement (REVIVE)"

Advanced Digital Sciences Center, Singapore 5/2013 - 8/2013
Research Internship

Project title: "Object detection in videos with supervoxel segmentation and CRF"

Panasonic R&D Center Singapore, Singapore 9/2012 - 12/2012
Industrial Attachment Program

Project title: "Registration of low-resolution depth images with high-resolution RGB images"

Singapore-MIT Alliance for Research and Technology, Singapore 5/2011 - 8/2011
Undergraduate Research Fellowship Program

Project title: "Situation reactive traffic-light control of multi-junctions"

TRAINING

Brain, Minds and Machines Summer Course, Woods Hole, MA, USA 8/2018
Trainee

Organized by the Center for Brains, Minds and Machines at MIT; The goal of this course is to help produce a community of leaders that is equally knowledgeable in neuroscience, cognitive science, and computer science and will lead the development of true biologically inspired AI.

IEEE SPS Winter School on Visual Image Search and Visual Analytics, Singapore 12/2014
Trainee

Organized by Rapid-Rich Object Search (ROSE) Lab at the Nanyang Technological University in Singapore, and co-sponsored by TENCENT and the IEEE Signal Processing Society; Classes taught by leading researchers in image processing and computer vision.

HONORS AND AWARDS

Dean's Fellowship, Graduate School of Arts and Sciences, Boston University 2018-2019

National Science Scholarship, Agency for Science, Technology and Research, Singapore 2015

SM3 Scholarship for Undergraduate Study in Singapore, Ministry of Education, Singapore 2010

TOOLS

Computer Languages	Python, MATLAB, Standard ML, Racket
Software & Tools	LaTeX, Keras, TensorFlow, PyTorch, Torch, OpenCV

TEACHING

CS 112 Introduction to Computer Science II Spring 2020
Teaching Fellow

CS 591 C1 Computational Game Theory Spring 2020
Grader

CS 112 Introduction to Computer Science II Fall 2019
Teaching Fellow

CS 591 C1 Compressive Sensing and Sparse Recovery Fall 2019
Grader

CS 542 Machine Learning Spring 2019
Teaching Fellow and Grader

9.012 Cognitive Science Fall 2017
Teaching Assistant

9.40 Introduction to Neural Computation Spring 2017
Teaching Assistant

PUBLICATIONS

[1] Young-Gyu Yoon, Peilun Dai, Jeremy Wohlwend, Jae-Byum Chang, Adam H Marblestone, and Edward S Boyden. Feasibility of 3d reconstruction of neural morphology using expansion microscopy and barcode-guided agglomeration. *Frontiers in computational neuroscience*, 11:97, 2017.

[2] Keng-Teck Ma, Liyuan Li, Peilun Dai, Joo-Hwee Lim, Chengyao Shen, and Qi Zhao. Multi-layer linear model for top-down modulation of visual attention in natural egocentric vision. In *Image Processing (ICIP), 2017 IEEE International Conference on*, pages 3470–3474. IEEE, 2017.

[3] Bappaditya Mandal, Rosary Yuting Lim, Peilun Dai, Mona Ragab Sayed, Liyuan Li, and Joo Hwee Lim. Trends in machine and human face recognition. In *Advances in Face Detection and Facial Image Analysis*, pages 145–187. Springer, Cham, 2016.