

EDUCATION

Boston University

Ph.D. candidate in Computer Science
- Advisor: Professor Brian Kulis

Boston, MA
2016 – 2020 (expected)

Harvard University

M.E. in Computational Science and Engineering

Cambridge, MA
2014 – 2016

Brown University

M.S. in Electrical Science

Providence, RI
2012 – 2013

Beijing Institute of Technology

B.S. in Electrical and Information Engineering

Beijing, China
2008 – 2012

RESEARCH INTERESTS

- **Embedding Models:** data retrieval, deep metric learning for ranking, and attribute-based models.
- **Transfer Learning:** image/video editing, domain adaptation, and segmentation.

RESEARCH & INDUSTRY EXPERIENCE

• Berkeley AI Research (BAIR) Lab

Visiting *Ph.D.* student supervised by Professor Trevor Darrell and Dr. Huijuan Xu
- Image retrieval and manipulation with fine-grained attribute representation learning.

Berkeley, CA
May 2020 – Present

• Google Research

Research Intern/Student Researcher

- Joint bilateral learning for photorealistic style transfer.
- Designed and implemented an image stylization model that runs in real-time at 4K on a mobile phone.
- Real-time localized video style transfer.
- Graphic design stylization.

Mountain View, CA
May 2019 – May 2020

• BU Image and Video Computing (IVC) Lab

Research Assistant

- Attribute-based deep metric learning for fashion retrieval.
- Deep metric learning for ranking.
- Fully-unsupervised image segmentation and learning the underlying lower-dimensional representation.
- Multi-domain transfer learning and adaptation.

Boston, MA
Sept 2016 – May 2019

• Google

SWE-PhD Intern at Street-Smart team

- Designed and implemented a deep attribute-based embedding model for traffic sign data.
- Improved the F1 score of unseen traffic sign detection by 18%.

Mountain View, CA
May 2018 – Aug 2018

• Legendary Applied Analytics

Research Intern

- Designed and implemented a deep Convolutional Neural Network for spatial-temporal representation learning.
- Designed a model to predict viewer counts and like/dislike ratio prediction for trailer movies.

Boston, MA
Sept 2017 – May 2018

• Harvard University

Research Assistant

- Designed a Recurrent Neural Network (RNN) model for intervention and outcome predictions in ICU
- Simulated multidimensional physiological time series of patients during vasopressor administration.
- *M.E.* Thesis: Cost-Sensitive Batch Mode Active learning and Its Application to Astronomy.

Cambridge, MA
Feb 2015 – June 2016

• Harvard Medical School

Research Fellow in the Laboratory of Systems Pharmacology (LSP)

Boston, MA

Aug 2013 – June 2016

- Developed a new computational method for predicting protein-DNA interactions based on sequences information.
- Developed a Protein-DNA Structure-Affinity Database in which the experimental and quantitative DNA binding affinities of helix-turn-helix proteins were mapped onto the structures of the corresponding protein-DNA complexes.

PUBLICATION

[P.9] **Xide Xia**, Kun He, Fatih Cakir, Brian Kulis. “Fashion Retrieval with Fine-Grained Attribute Representation Learning.” Under preparation.

[P.8] **Xide Xia**, Tianfan Xue, Wei-shang Lai, Zheng Sun, Abby Chang, Brian Kulis, Jiawen Chen. “Real-time Localized Photorealistic Video Style Transfer.” Under reviewing.

[P.7] Ali Siahkamari, **Xide Xia**, Venkatesh Saligrama, David Castañón, Brian Kulis. “Learning to Approximate a Bregman Divergence.” Under reviewing.

[P.6] **Xide Xia**, Meng Zhang, Tianfan Xue, Zheng Sun, Hui Fang, Brian Kulis, Jiawen Chen. “Joint Bilateral Learning for Real-time Universal Photorealistic Style Transfer.” ArXiv tech report 2004.10955. (Under reviewing)

[P.5] Xingchao Peng, Qinxun Bai, **Xide Xia**, Zijun Huang, Kate Saenko, Bo Wang. “Moment Matching for Multi-Source Domain Adaptation.” In Proc. IEEE International Conference on Computer Vision (ICCV) 2019, Oral.

[P.4] Kun He, Fatih Cakir, **Xide Xia**, Brian Kulis, Stan Sclaroff. “Deep Metric Learning to Rank.” In Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2019.

[P.3] **Xide Xia**, Xingchao Peng, Brian Kulis. “W-Net: A Deep Model for Fully Unsupervised Image Segmentation.” ArXiv tech report 1711.08506.

[P.2] **Xide Xia**, Finale Doshi-Velez, Pavlos Protopapas. “Cost-Sensitive Batch Mode Active learning: Designing Astronomical Observation by Optimizing Telescope Time and Telescope Choice.” In Proceedings of SIAM Data Mining (SDM) 2016.

[P.1] Mohammed AlQuraishi, Shengdong Tang, **Xide Xia**. “An affinity-structure database of helix-turn-helix: DNA complexes with a universal coordinate system.” BMC Bioinformatics, 16(1), 390. PMID:26586237.

HONORS & AWARDS

[A.7] Research Fellowship (2016-Present, Boston University)

[A.6] CRA-Women Graduate Cohort Workshop Student Travel Award 2017

[A.5] Dean’s Fellow Scholarship - awarded to two students each year (2016-2017, Boston University)

[A.4] Harvard IACS Scholarship - awarded to one student each year (2015-2016, Harvard University)

[A.3] SDM Student Travel Award 2016

[A.2] Research Fellowship (2013-2016, Harvard Medical School)

[A.1] Ren-Min Scholarship (2008-2012, Beijing Institute of Technology)

TECHNICAL STRENGTHS

- **Programming Languages:** Python, C/C++, Java, Matlab, and R.
- **Deep Learning Libraries:** Tensorflow, PyTorch, MatConvNet, Keras, and Caffe.

TEACHING

• CS591 Deep Learning, Boston University

Fall 2018

• CS131 Combinatoric Structures, Boston University

Fall 2016

• AM207 Stochastic Methods for Data Analysis, Inference, and Optimization, Harvard University

Spring 2016

PROFESSIONAL SERVICES

Reviewers for CVPR, ICCV, ECCV, ACMMM, AAAI, BMVC, and NIPS.