Xide Xia

Web: https://xidexia.github.io/
Email: xidexia@bu.edu; xidexia@gmail.com

EDUCATION

Boston University — Boston, MA
Ph.D. candidate in Computer Science — 2016 – 2020 (expected)
- Advisor: Professor Brian Kulis

University of California, Berkeley — Berkeley, CA
- Visiting *Ph.D.* student supervised by Professor Trevor Darrell — 2019 – Present

Harvard University — Cambridge, MA
M.E. in Computational Science and Engineering — 2014 – 2016

Brown University — Providence, RI
M.S. in Electrical Science — 2012 – 2013

Beijing Institute of Technology — Beijing, China
B.S. in Electrical and Information Engineering — 2008 – 2012

RESEARCH INTERESTS

- **Transfer Learning**: image/video/handwriting style transfer, domain adaptation, and segmentation.
- **Embedding Models**: fast fashion retrieval, deep metric learning for ranking, and attribute-based models.

RESEARCH & INDUSTRY EXPERIENCE

- **Berkeley AI Research (BAIR) Lab** — Berkeley, CA
  Visiting *Ph.D.* student supervised by Professor Trevor Darrell and Dr. Huijuan Xu — Oct 2019 – Present
  - Video artistic style transfer learning.

- **Google AI Research** — Mountain View, CA
  Research Intern/Student Researcher — May 2019 – Present
  - Joint bilateral learning for photorealistic style transfer.
  - Generalize the style transfer model to arbitrary styles.
  - Graphic design data stylization.

- **BU Image and Video Computing (IVC) Lab** — Boston, MA
  Research Assistant — Sept 2016 – May 2019
  - Attribute-based deep metric learning for fashion retrieval.
  - Deep metric learning for ranking.
  - Fully-unsupervised image segmentation and learning the underlying lower-dimensional representation for images.
  - Multi-domain transfer learning and adaptation.

- **Google** — Mountain View, CA
  SWE-PhD Intern — May 2018 – Aug 2018
  - Designed and implement a deep attribute-based embedding model for traffic sign data.
  - Improved the F1 score by around 18% on unseen data.

- **Legendary Applied Analytics** — Boston, MA
  Research Intern — Sept 2017 – May 2018
  - Developed and implement a deep Convolutional Neural Network for spatial-temporal representation learning.
  - Developed a model to predict viewer counts and like/dislike ratio prediction for trailer movies

• **Harvard University** Cambridge, MA
Research Assistant Feb 2015 – June 2016

- 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.

• **Harvard Medical School** Boston, MA
Research Fellow in the Laboratory of Systems Pharmacology (LSP) 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.7] **Xide Xia**, Meng Zhang, Tianfan Xue, Zheng Sun, Hui Fang, Brian Kulis, Jiawen Chen. "Joint Bilateral Learning for Fast Universal Photorealistic Style Transfer." Under reviewing.

[P.6] **Xide Xia,** Kun He, Fatih Cakir, Brian Kulis. "Fashion Retrieval with Fine-Grained Attribute Representation Learning." 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 Conference (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, Boston, MA)
[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, Boston, MA)
[A.4] Harvard IACS Scholarship - awarded to one student each year (2015-2016, Harvard University, Cambridge, MA)
[A.3] SDM Student Travel Award 2016
[A.2] Research Fellowship (2013-2016, Harvard Medical School, Cambridge, MA)
[A.1] Ren-Min Scholarship (2008-2012, Beijing Institute of Technology, Beijing, China)

TECHNICAL STRENGTHS

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

TEACHING & PROFESSIONAL SERVICES

• 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

• Reviewer of CVPR, ICCV, ECCV, AAAI, ACMMM, WACV, SDM, IJCAI, and BMVC.