Xide Xia

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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 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), UC Berkeley** — Berkeley, CA
  Visiting *Ph.D.* student supervised by Professor Trevor Darrell — Sept 2019 – Present
  - Develop an end-to-end model for zero-shot real-time video style transfer.

- **Google AI Research** — Mountain View, CA
  Student Researcher — Sept 2019 – Present
  - Generalize the style transfer model to arbitrary styles.
  - Extend the image photorealistic style transfer model to video datasets.
  - Results will be submitted as a conference paper to CVPR 2020.

- **Google AI Research** — Mountain View, CA
  Research Intern — May 2019 – Aug 2019
  - Developed an end-to-end model for image enhancement and photorealistic image style transfer.
  - Graphic/layout design stylization.

- **BU Image and Video Computing (IVC) Lab** — Boston, MA
  Research Assistant — Sept 2016 – May 2019
  - Attribute-based deep metric learning for fashion retrieval.
  - Fully-unsupervised image segmentation and learning the underlying lower-dimensional representation for images.
  - Multi-domain transfer learning and adaptation.
  - Results are published/submitted as conference papers at CVPR, ICCV, WACV and AAAI.

- **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 and implemented 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.
- Results are published as a conference paper at SDM 2016.

• **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 (PDSA) in which the experimental and quantitative DNA binding affinities of helix-turn-helix proteins were mapped onto the crystal structures of the corresponding protein-DNA complexes.
- Results are published as a journal paper at BMC Bioinformatics.

PUBLICATION

[P.6] **Xide Xia**, Kun He, Fatih Cakir, Brian Kulis. "Fashion Retrieval with Fine-Grained Attribute Representation Learning." Submitted; Under reviewing.

[P.5] **Xide Xia**, Xingchao Peng, Brian Kulis. "**W-Net: A Deep Model for Fully Unsupervised Image Segmentation.**" ArXiv tech report 1711.08506. Submitted; Under reviewing.

[P.4] 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.3] 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.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)

TEACHING EXPERIENCE

• CS585 Image and Video Computing, Boston University Spring 2020
• 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

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

TECHNICAL STRENGTHS

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