Xide Xia

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OBJECTIVE

Summer internship in computer vision, machine learning, or related areas for 2018.

EDUCATION

Boston University
Ph.D. candidate in Computer Science
Advisor: Professor Brian Kulis
Sept 2016 - Present
Boston, MA

Harvard University, Institute for Applied Computational Science
M.E. in Computational Science and Engineering
Sept 2014 – May 2016
Cambridge, MA

Brown University, School of Engineering
M.S. in Electrical Science
Sept 2012 – Dec 2013
Providence, RI

Beijing Institute of Technology, College of Information and Electronics
B.S. in Electrical and Information Engineering
Sept 2008 – May 2012
Beijing, China

RESEARCH INTERESTS

Machine Learning, Deep Learning, Video Learning, Image Segmentation, Representation Learning, Data Mining

PROFESSIONAL EXPERIENCE

Legendary Applied Analytics, Boston, MA   Sept 2017 – Present
Graduate Quantitative Research Intern advised by Dr. Jonathan Foster.

• Develop and implement a 3D Convolutional Network for spatial-temporal representation learning.

Information and Data Sciences (IDS) group, Boston University, Boston, MA   Sept 2016 – Present
Research advised by Professor Brian Kulis.

• Designed and implemented an end-to-end Convolutional Neural Network Architecture for fully-unsupervised image segmentation and learning the underlying lower-dimensional representation for input image data on the hidden layer.
• Trained a deep generative model for unsupervised clustering task in the hidden space.

Image and Video Computing (IVC) Lab, Boston University, Boston, MA   Feb 2017 – June 2017
Research advised by Professor Margrit Betke.

• Designed and implemented a Convolutional Neural Network (CNN) model to make age/gender/ethnicity prediction on the data of Twitter users profile images.

Laboratory of Systems Pharmacology (LSP), Harvard Medical School, Boston, MA   Aug 2013 – June 2016
Graduate Research Fellow at Department of Systems Biology advised by Dr. Mohammed AlQuraishi and Professor Peter Sorger.

• 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.

***M.E. Thesis:* Batch Mode Active Learning and Its Application to Astronomy, Harvard University**   Feb 2015 – May 2016
Advisors: Professor Finale Doshi-Velez and Dr. Pavlos Protopapas.

• Developed a batch-mode cost-sensitive active learning approach that not only exploited uncertainty and representativeness of the whole unlabeled dataset but also considered the annotation costs.
• Designed a selection criterion that combined uncertainty and representativeness by using a synthesized heuristic argument.
• Applied the approach to optimize astronomical observations for object classification.

IACS Capstone Project, Harvard University, Cambridge, MA   Dec 2015 – May 2016
Research advised by Professor Finale Doshi-Velez.

• 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.

Agilent Technologies Co., Ltd, Beijing, China   Sept 2011- Jan 2012
Undergraduate intern at mobile broadband division.
• Quality assurance engineer for 3G mobile telecommunication (TD-SCDMA) RF.

PUBLICATION

[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] AlQuraishi, M., Tang, S., Xia, X. "An affinity-structure database of helix-turn-helix: DNA complexes with a universal coordinate system." BMC Bioinformatics, 16(1), 390. PMID:26586237. (Database: http://staging.proteindna.hms.harvard.edu/).

TEACHING EXPERIENCE

Boston University   Boston, MA
• CS131 Combinatoric Structures, 2016 Fall

Harvard University   Cambridge, MA
• AM207 Stochastic Methods for Data Analysis, Inference, and Optimization, 2016 Spring

HONORS & AWARDS

2017
• Dean's Fellow Scholarship (Boston University, Boston, MA)
• CRA-Women Graduate Cohort Workshop Student Award

2016
• Harvard IACS Student Scholarship (Harvard University, Cambridge, MA)
• SDM Student Award

Before 2016
• Research Fellowship (2013-2016, Harvard Medical School, Cambridge, MA)
• Ren-Min Scholarship (2008-2012, Beijing Institute of Technology, Beijing, China)

TECHNICAL STRENGTHS

Proficient in programming languages: Python, Matlab, C/C++
Familiar with deep learning packages: Tensorflow, PyTorch, Keras, Caffe