

Linting Xue

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OBJECTIVE

To obtain a summer 2018 internship position in the field of AI, machine learning and data mining.

EDUCATION

Ph.D. in Computer Science, GPA: **3.8/4.0**, North Carolina State University, Raleigh, NC 2014 -Present

M.S. in Mechanical Engineering, GPA: **3.8/4.0**, Wilkes University, PA 2012 - 2014

B.E. in Electrical Engineering, GPA: **3.4/4.0**, Shanghai University of Electric Power, China 2006 - 2010

RESEARCH EXPERIENCE

Argumentation Mining to Support Automatic Grading

Ongoing

- Applying maximum entropy model to identify the argument and non-argument clauses.
- Applying deep learning to classify the argument components (e.g. claim, premise, hypothesis) and their relationships.

Web-based Argument Diagram Tool for Teaching Critical Thinking

Ongoing

- Developing a web-based argument diagram tool using Flask, HTML and JavaScript.
- Developing a drag-and-drop interface for analyzing textual arguments.

Rule Induction on Argument Diagrams for Automatic Grading

08/2014 - 07/2017

- Applied graph rule induction algorithms (e.g. Subdue, gSpan) on student-produced argument diagrams to induce graph rules.
- Implemented evolutionary computation (EC) with novelty selection to induce graph rules.
- EC induced 50% more rules with better performance compared to expert rules and rules induced by Subdue and gSpan.

Social Network Analysis of Student Online Interaction

02/2017 - 07/2017

- Investigated the correlation between social metrics (e.g. in- and out- degree, hub and authority score) and students' grades.
- Build an early warning system to help students on track.

CONFERENCE ORGANIZATION

Co-chaired the third international workshop on Graph-based Educational Data Mining, 2017.

PUBLICATIONS

- [1] **Xue, Linting**, Collin F. Lynch, and Min Chi. "*Mining Innovative Augmented Graph Grammars for Argument Diagrams through Novelty Selection.*" In Proceeding of the 10th Conference on Educational Data Mining, pp. 296 - 300. (2017)
- [2] Gitinabard, Niki, **Linting Xue**, et al. "*Social Network Analysis on Blended Courses.*" The Third International Workshop on Graph-Based Educational Data Mining. (2017)
- [3] **Xue, Linting**. "*Intelligent Argument Grading System for Student-produced Argument Diagrams.*" Doctoral Consortium on the 10th Conference on Educational Data Mining. (2017)
- [4] **Xue, Linting**, Collin Lynch, and Min Chi. "*Unnatural Feature Engineering: Evolving Augmented Graph Grammars for Argument Diagrams.*" In Proceeding of the 9th Conference on Educational Data Mining, pp. 255 - 262. (2016)
- [5] Lynch, Collin F., **Linting Xue**, and Min Chi. "*Evolving augmented graph grammars for argument analysis.*" In the proceedings of the 2016 on Genetic and Evolutionary Computation Conference Companion, ACM, pp. 65 - 66. (2016).

- [6] **Xue, Linting**, Collin F. Lynch, and Min Chi. "*Graph Grammar Induction via Evolutionary Computation.*" The Second International Workshop on Graph-Based Educational Data Mining. (2015)
- [7] Zhang, Xiaoli, **Linting Xue**, et al. "*Digital human modeling for ergonomic evaluation of patient table height.*" Robotics and Biomimetics (ROBIO), 2013 IEEE International Conference on, IEEE, pp. 1480 - 1485. (2013)
- [8] Li, Songpo, Jiucai Zhang, **Linting Xue**, et al. "*Attention-aware robotic laparoscope for human-robot cooperative surgery.*" Robotics and Biomimetics (ROBIO), 2013 IEEE International Conference on, IEEE, pp. 792 - 797. (2013)

SELECTED COURSE PROJECTS

- Neural Activities Detection by Classifying the Data of EEG Signals** 08/2016 - 12/2016
- Led project to detect neural activities (e.g. liking, disliking) using deep learning (Deep Belief Network based on RBMs).
 - Achieved 26% improvement in accuracy over SVM and logistic regression.
- Image Classification on CIFAR-10 Dataset** 08/2015 - 12/2015
- Led project to classify images using deep learning (Convolutional Neural Network, and Stacked Autoencoders).
 - Achieved 30% improvement in accuracy over PCA+SVM.

HONORS&AWARDS

- Merit Student Award from Shanghai Education Bureau (Top 1%) 2010
- Undergraduate Student Merit Award (Top 3%) 2010
- Outstanding Undergraduate Thesis awards (Top 3%) 2010
- The 2nd prize of National Freescale Cup Intelligent Car Competition (Top 1%) 2009
- Excellent Student Scholarship from University (Top 8%) 2008
- National Encourage Scholarship (Top 3%) 2007

SKILLS

Python (Nltk, Sklearn, Keras, Theano, Flask, etc), R, Matlab, C++, JavaScript, HTML, MySQL, Linux

REFERENCES

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