Xinya Du

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http://sjtudxy.github.io/

Areas of Interest

- Natural Language Processing and Machine Learning
- Algorithmic Game Theory

Education

- **Shanghai Jiao Tong University** — Shanghai, China
  School of Electronic Information and Electrical Engineering — *Sep. 2013 – Jul. 2016 (expected)*
  - B.S., Computer Science
  - Overall GPA(141 credits): 94.50/100, **Rank: 1/122**
  - Good **mathematics** training: All 11 math courses are above A and 10 of them are over A+.
- **Shanghai Jiao Tong University** — Shanghai, China
  SJTU-ParisTech Elite Institute of Technology (SPEIT) — *Sep. 2012 – Jul. 2013*
  - Overall GPA(77.5 credits): 92.85/100, **Rank: 1/62**

Research Experience

- **Neural Networks Approach for Fine-grained Opinion Extraction** — Ithaca, NY, USA
  NLP group, Cornell University — *Aug. 2015 – Dec. 2015*
  - *Advisor: Claire Cardie*
  - Designed heuristic rules using dependency parse tree to eliminate inappropriate opinion candidates during inference. Empirical results showed higher precision and higher F-measure.
  - Proposed to use deep recurrent neural networks to produce the *n-best* labeling sequences, which can be fed into integer linear programming (ILP) system for joint inference.
  - Proposed to evaluate labeling sequences using **Sentence-Level Log-Likelihood (SLL)** at the output layer of deep recurrent neural networks. Empirical results showed over **5%** improvement on F-measure of opinion target extraction and accurate ranking for *n-best* labeling sequences.
  - Building an ensemble system using the above algorithm to participate in Belief and Sentiment Evaluation 2015 (**BeSt2015**).
- **Online Auction Mechanism Design with Time Varying Value** — Shanghai, China
  Shanghai Key Laboratory of Scalable Computing and Systems — *Jun. 2014 – Jun. 2015*
  - *Advisor: Fan Wu*
  - Proposed the new scenario in online auction mechanism design where bidder's value may vary over time.
  - Extended the classic payment determination algorithm (Myerson) to fit the new model. Proposed mechanism ensured strategy-proofness and achieved constant competitive ratio.
  - **Technical Paper**: *http://xinyadu.weebly.com/uploads/6/6/3/5/66350551/oa.pdf*
- **User Demographics Mining from Massive SMS Dataset** — Shanghai, China
  IIOT research center, Shanghai Jiao Tong University — *Jun. 2015 – Sep. 2015*
  - *Advisor: Xinbing Wang*
  - Processed a massive and noisy SMS dataset, designed a filter to reduce noise and finally created a gold-standard dataset regarding user demographics with clustering method.
  - Built a system to do classification on the demographics information of users for whom we can provide targeted advertisements.

Awards & Honors

- **National Scholarship 2013** Highest honor for undergraduates in China, awarded to top 1% students
- **Shanghai Undergraduate Mathematical Contest in Modeling 2014** The Second Prize
- **Shanghai Jiao Tong University Excellent Student Scholarship 2014**
- **National Olympiad in Mathematics in Provinces 2011** The First Prize
- **National Olympiad in Chemistry in Provinces 2011** The First Prize
- **National Olympiad in Informatics in Provinces 2010** The First Prize

Selected Course Projects https://github.com/sjtudxy

- **SmallC Compiler** Shanghai, China
  Shanghai Jiao Tong Univeristy *Oct. 2014 - Dec. 2014*
  - Built a compiler translating the basic C source code to MIPS assembly code with Lex and Yacc.
  - Top performance in testing, Score: 100/100
- **Design and Implementation of File System** Shanghai, China
  Shanghai Jiao Tong Univeristy *May. 2014 - Jun. 2014*
  - Designed and implemented a basic disk-like secondary storage server as well as a basic file system to act as a client, which uses the disk services provided by the server.
  - Top performance in testing, Score: 100/100

Skills

- **Natural Languages:** Chinese (mother tongue), English (fluent), French (basic)
- **Programming Languages:** C/C++, Python, Java, LaTeX, Matlab, Mathematica
- **Operating Systems:** Linux, Mac OS X, Windows
- **Software:** Stanford CoreNLP, Eclipse, VisualStudio SDK, Lex, Yacc

Volunteering Activities

- Volunteer of Shanghai Library *Aug. 2014*
- Secretary of Team of Youth Volunteers, SJTU *Sep. 2012 - Jul. 2013*
- Volunteer of Asia Student Supercomputer Challenge (ASC) *May. 2013*
- Voluntary blood donation *Apr. 2013*