Shuaichen Chang

Tel: (+86) 187-2198-3259   Email: scchang711@gmail.com   Homepage: shuaichenchang.github.io

Address: Building No.1, No.1433 Cailun Road, Pudong District, Shanghai, China, 201203

EUDCATION

Fudan University *Sep.2013-Jul.2016*

Bachelor of Science, Computer Science and Technology *(Expected)*

- GPA: 3.61/4.0; Rank: 11/77; Major GPA: 3.86/4.0;
- GPA (last two year): 3.89/4.0; Rank (last two year): 1/77;
- Selected into the Outstanding Student Honor Program, School of Computer Science (Top 25%)

RESEARCH EXPERIENCE

Research Intern at NYU shanghai (Supervisor: Prof. Zheng Zhang)

SynSem: Learning Embedding with a Two-Stream Neural Language Model (team work) *Oct.2016-Present*

- This work utilizes two-stream GRU for language model and POS tagging, respectively, and adversarial training to encode semantic and syntactic information of a word in separate embedding space, uses context-induced gate to generate dynamic word embedding.
- Proposed the use of syntax-related task (POS tagging) as supervision, and was responsible for tuning parameters of different multi-task frameworks, as well as the model evaluation.
- Achieved higher accuracy than combined embedding on word similarity and word relationship task.
- This work is under review of ACL2017.

Research Assistant at Fudan Natural Language Processing Group (Supervisor: Prof. Xipeng Qiu)

Neural Stack Machine *Apr.2016-Present*

- Designed a neural stack machine (differentiable end-to-end), consisting of a controller (a Recurrent Neural Network), a stack and an instruction set, to learn basic algorithms, like context-free language recognition, which are applicable to a traditional stack machine.
- Implemented a Stack-Augmented Recurrent Neural Network (RNN). Proposed to let networks learn how to select instructions from an additional instruction set instead of learning instructions directly, in order to extend the network's capacity to learning more syntactic information.
- Alleviated the long-term dependency problem compared with RNN family model (GRU, LSTM).
- The detail can be accessed on my homepage.

Semantic Role Labeling based on Sequence-to-Sequence Model *Feb.2016- Jul.2016*

- Proposed to deal with traditional labeling tasks like Semantic Role Labeling (SRL) as a language generation approach.
- Used GRU Encoder-Decoder and Pointer Networks on SRL, which encode the input sentence and the input predicate into mixed vector representations, and generate semantic arguments associated with the predicate.

Generating Summarization based on Sequence-to-Sequence Model *Jun.2015-Sep.2015*

- Re-implemented an GRU Encoder-Decoder with attention from scratch to generate abstractive summarization on LCSTS dataset (Chinese microblogging website summarization dataset).

SELECTED COURSE PROJECTS

Real-Time Hand Detection with Random Forest based on Depth Images *Oct.2015-Dec.2015*

- Implemented pixel-level classification with Random Forest.
- Selected depth difference between the current pixel and a random pixel around it as feature.
- Achieved 10% higher F-score than hand detection based on skin color.

Joint Learning of Chinese Word, Character and Radical Embedding *Dec.2015-Jan.2016*

- Designed a CBOW with Chinese Word, Character and Radical Embedding
- Collected and evaluated on a small Chinese word-similarity dataset (100 pairs of words)
- Achieved better performance than word level embedding and character level embedding.

Online Bookstore based on JSP and MySQL *Apr.2015-Jun.2015*

- Adopted Bootstrap for front-end design, JSP for dynamic web pages, MySQL for database management.
- Implemented functions including book search, classification and recommendation etc.

AWARDS & SCHOLARSHIP

National Scholarship, Ministry of Education of P.R.China *2016, 2015*

- Awarded to Top 2% undergraduates in Fudan, highest honor to Chinese undergraduates.

First Class Outstanding Student Honor Program scholarship, School of Computer Science *2015*

- Awarded to Top 10% students at School of Computer Science

Silver Medal in the ACM-ICPC Asia Regional, ACM-ICPC *Oct.2013*

- As the team leader, ranked 21 out of 123 teams

PROFESSIONAL SKILLS

Programming Languages: Python, C/C++, Lua, Java, C#, JavaScript

Technologies/Libraries: Theano, Torch, OpenCV, MySQL, Socket

ACTIVITES

Vice Chairman of Student Union of TengFei College (over 2000 undergraduates), Fudan *Sep.2014-Sep.2015*

Secretary of Tennis Association, Fudan *Feb.2014-Feb.2015*

China Delegate in 2015 US-China Student Summit *May.2015*

Volunteer in GuanXing Middle School *Sep.2015-Jul.2016*