FUXIAO LIU

120 Yellowstone Dr., VA 22903 • USA • +1.434.227.6660 • fl3e@virginia.edu

EDUCATION

University of Virginia *2019.8-present*
M.S. in Computer Science
Overall GPA: (3.75/4.0)

Beijing University of Posts and Telecommunications/ *2015.8-2019.6*
Queen Mary University of London(Joint Bachelor Programme)
Double B.S. in Telecommunications Engineering with Management
Overall GPA: (3.80/4.0)

PUBLICATION AND MANUSCRIPTS

[1] **Fuxiao Liu**, Yinghan Wang, Tianlu Wang, Vicente Ordonez. "VisualNews : Benchmark and Challenges in Entity-aware Image Captioning". *Under Review, 2020*

[2] **Fuxiao Liu**, Ming Wu. "The Research of Semantic Segmentation with Light Neural Networks". *Bachelor Thesis, 2019*

AWARDS AND ACHIEVEMENTS

2019-2020   Academic Excellence Fellowship (UVA)
2019   First Class Outstanding Graduate (BUPT)
2018   Meritorious Winner in MCM/ICM Interdisciplinary Contest in Modeling
2016-2018   Second-class Scholarship (BUPT)

RESEARCH EXPERIENCES

Entity Aware News Image Caption
University of Virginia, Charlottesville, VA, USA *2020.3-present*
Vision, Language, and Learning lab
Research Assistant, Advisor: Professor Vicente Ordonez

- Introduced VisualNews, the largest and most diverse news image captioning dataset.
- Proposed VisualNews-Captioner, a captioning method for news images, showing superior results with fewer parameters than competing methods.
- Designed Entity-Aware module and Entity-Guide attention layer, effectively improving the generation of named entities, increasing CIDEr by 10+ and 5+ points.

Evaluation of Explainable Recommendation
University of Virginia, Charlottesville, VA, USA *2020.9-present*
Human-Centric Data Mining Group
Research Assistant, Advisor: Professor Hongning Wang

- Implemented supervision methods to extract high quality feature nouns from Yelp and Amazon datasets.
- Reproduced existing personalized explainable models according to the papers.
- Discovered that non-personalized explanations can perform better than personalized explanations in terms of existing evaluation metrics.

Deep Learning Network Embedding with Regular Equivalence
University of Virginia, Charlottesville, VA, USA *2019.9-2019.11*
Research Assistant, Advisor: Professor Jundong Li

- Designed an Auto-Encoder based on the attention mechanism and LSTM to learn structural information from the multi-hop neighborhoods.
- Experimented on American Air Traffic Network dataset, increased the accuracy by 0.03 compared to the baseline algorithms.

Semantic Segmentation with Light Neural Networks

Beijing University of Posts and Telecommunications, Beijing, China *2018.3-2019.4*
Key Laboratory of Pattern Recognition and Intelligence System
Research Assistant, Advisor: Professor Ming Wu

- Discovered the importance of the light models for devices with very limited computing power.
- Experiments with different lightweight modules with CRF in the Encoder-Decoder model on two Remote Sensing datasets.
- Developed a novel cost-efficient Fully Convolutional Network, which achieved better accuracy with much smaller model size(17.2M) than baseline models(100+ M).

TECHNICAL STRENGTHS

Programming Languages	Proficient in Python, Java
Research Skills	Familiar with state-of-the-art machine learning and deep learning,Tensorflow, PyTorch