FUXIAO LIU

120 Yellowstone Drive, VA 22903 • USA • https://fuxiaoliu.github.io • fl3es@virginia.edu

EDUCATION

University of Virginia *2019.8-2021.5*
M.S. in Computer Science
GPA: (3.75/4.0)

Queen Mary University of London *2015.9-2019.6*
Double B.S. in Telecommunications Engineering with Management
GPA: (3.80/4.0)

Beijing University of Posts and Telecommunications *2015.9-2019.6*
B.S. in Telecommunications Engineering with Management
GPA: (88/100)

PUBLICATION AND MANUSCRIPTS

1) **Fuxiao Liu**, Yinghan Wang, Tianlu Wang, Vicente Ordonez. "VisualNews: Benchmark and Challenges in Entity-aware Image Captioning". *Submitted to NAACL2021*
2) **Fuxiao Liu**, Yinghan Wang, Tianlu Wang, Vicente Ordonez. "MT: Multi-Modal Transformer for News Image Captions". *Submitted to ICME2021*
3) **Fuxiao Liu**, Ming Wu. "A Novel Lightweight Semantic Segmentation Network in Remote Sensing". *Bachelor Thesis, 2019*

AWARDS AND ACHIEVEMENTS

2019 Academic Excellence Fellowship (UVa)
2019 Bachelor of Science with Honors (BUPT)
2018 Meritorious Winner in MCM/ICM Interdisciplinary Contest in Modeling
2017 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.
- Design a model based on the Transformer architecture to improve the generation of named entities.
- Experimented on two datasets, increased CIDEr score by 10+ points with much fewer parameters (93M to 200M) than baseline methods.
- Demonstrate training a model on the raw text is more beneficial than on the predefined template.

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 supervisions to extract high-quality feature words from a crowdsourcing platform.
- Developed a hierarchical model based on Bayesian Personalized Ranking algorithm to predict the features of an item that attract potential users.
- Discovered that non-personalized methods can perform better than personalized methods in terms of existing evaluation metrics.

Graph Embedding with Role Classification
University of Virginia, Charlottesville, VA, USA *2019.9-2019.11*
Research Assistant, Advisor: Professor Jundong Li

- Designed an unsupervised model to learn the role representations in given graphs.
- Employed three attention layers to extract global context information.
- 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 lightweight models for semantic segmentation.
- Experiments with different lightweight modules with the Conditional Random Field algorithm on two remote sensing datasets.
- Developed a cost-efficient encoder-decoder network, which achieved higher accuracy and compressed the model size over 5 times.

TECHNICAL STRENGTHS

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