

FUXIAO LIU

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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*

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

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.

Unsupervised Learning for Role Embeddings

University of Virginia, Charlottesville, VA, USA

2020.3-2020.5

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 neighborhood.
- 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).

AWARDS AND ACHIEVEMENTS

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

TECHNICAL STRENGTHS

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