FUXIAO LIU

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EDUCATION

University of Maryland - College Park *2021.8-Present*
Ph.D in Computer Science
University of Virginia *2019.8-2021.5*
M.S. in Computer Science
Beijing University of Posts and Telecommunications *2015.9-2019.6*
B.S. in Telecommunications Engineering with Management

PUBLICATIONS

1)**Visual News: Benchmark and Challenges in News Image Captioning** EMNLP 2021
Fuxiao Liu, *Yinghan Wang, Tianlu Wang, Vicente Ordonez*

2)**Semantic Segmentation with Light Neural Networks** Bachelor Thesis
Fuxiao Liu, *Ming Wu*

ACADEMIC EXPERIENCE

Entity-aware News Image Captioning
University of Virginia, Charlottesville, VA, USA *2020.4-2021.3*
Advisor: 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.

Evaluation of Explainable Recommendation
University of Virginia, Charlottesville, VA, USA *2020.9-2020.12*
Advisor: 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..

Graph Embedding with Role Classification
University of Virginia, Charlottesville, VA, USA *2019.9-2019.12*
Advisor: 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*
Advisor: 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.

INDUSTRY EXPERIENCE

Wireless Communication Project, *Software Intern* *2018.7-2018.8*
ZTE Corporation, Beijing, China

- Practiced the technical skills such as LTE Optimization, XPON Practice and WLAN Practice.
- Conducted hand-on experiments of data communication and other relevant ones.

Chatbot for Ticket Reservation, *Software Intern* *2017.12-2018.3*
Juzi Bot, Beijing, China

- Established Application Programming Interface services for two third-party Natural Language understanding platforms by using Node.js.
- Implemented machine learning models to achieve semantic recognition in chatbot dialogues.

AWARDS

Academic Excellence Fellowship (UVa) *2020*
Bachelor of Science with Honors (BUPT) *2019*
Meritorious Winner in MCM/ICM Interdisciplinary Contest in Modeling *2018*

PROFESSIONAL SERVICE

Teaching Assistant: Introduction to Date Science (*CMSC320*) *2021.8-Present*