

DI WU

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EDUCATION

University of California, Los Angeles

Ph.D. in Computer Science

UCLANLP Group (with Prof. Kai-Wei Chang)

Los Angeles, CA, USA

09/2022-Present

- Research Interests: keyphrase generation, text generation evaluation, retrieval-enhanced language models

University of California, Los Angeles

B.S. in Computer Science, Summa Cum Laude

Los Angeles, CA, USA

08/2018-06/2022

- Overall GPA: **3.973/4.000**
- HSSEAS Dean's Honor List (8 times)

RESEARCH EXPERIENCE

UCLA NLP Lab

Student Researcher, Supervisor: Prof. Kai-Wei Chang

Los Angeles, CA, USA

02/2021 - present

- Research on neural keyphrase generation methods and their evaluation.
- Research on building robust and reliable evaluation metrics for text generation.
- Collaborate with Taboola. Using an internal dataset as the use case, experiment with keyphrase generation and adaptation methods and compare with the company's working pipeline.

The Ozcan Research Group, UCLA

Student Research Assistant, Supervisor: Prof. Aydogan Ozcan

Los Angeles, CA, USA

09/2019 - 06/2022

- Researched on virtual staining of skin tissues with an emphasis on Basal Cell Carcinoma. Designed methods to improve both single-image quality and temporal coherence of the predictions.
- Explored dataset engineering and data augmentation methods to mitigate class imbalance.

PUBLICATIONS

Wu, D., Ahmad, W. U., and Zhang, D. (2023). Selective Retrieval-Augmented Infilling for Repository-Level Code Completion. *In preparation*.

Wu, D., Ahmad, W. U., and Chang, K. W. (2023). Rethinking Model Selection and Decoding for Keyphrase Generation with Pre-trained Sequence-to-Sequence Models. *EMNLP 2023*.

Wu, D., Yin, D, and Chang, K. W. (2023). KPEval: Towards Fine-grained Semantic-based Evaluation of Keyphrase Extraction and Generation Systems. *In submission*.

Wu, D., Ahmad, W. U., and Chang, K. W. (2022). Pre-trained Language Models for Keyphrase Generation: A Thorough Empirical Study. *In submission*.

Wu, D., Ahmad, W. U., Dev, S., and Chang, K. W. (2022). Representation Learning for Resource-Constrained Keyphrase Generation. *Findings of the ACL: EMNLP 2022*.

Li, J., Garfinkel, J., Zhang, X., **Wu, D.**, Zhang, Y., de Haan, K., Wang, H., Liu, T., Bai, B., Rivenson, Y., Rubinstein, G., Scumpia, P., and Ozcan, A. (2021). Biopsy-free in vivo virtual histology of skin using deep learning. *Light: Science & Applications*, 10(1), 1-22.

INTERNSHIP EXPERIENCE

AWS AI

Applied Scientist Intern; Mentor: Wasi Ahmad, Dejiao Zhang

New York, NY, USA

06/2023 - 09/2023

- Researched on improving retrieval-augmented code language models for repository-level code completion.

- Formulated the task of selective retrieval-augmented infilling. Designed approaches from the perspective of in-repository code retrievers and the code generator models.
- The designed model achieves no performance loss with only 10% of retrieval budget.

Microsoft Research Asia

Research Intern; Mentor: Ning Shang

Beijing, China
04/2021 - 09/2021

- Participated in the research project "Sparse Analysis". Compared over 10 model compression methods including pruning, quantization, and knowledge distillation on MobileNetV2 and Transformers. For pruning, the analysis involved criterion, sparsity scheduling, and learning scheduling.
- Participated in the open source AutoML project [NNI](#). Contributed over 5000 lines of code including a hyperparameter optimization benchmark, a Transformer pruner, and three examples.

NewsBreak

Natural Language Processing Intern

Beijing, China
07/2020 - 10/2020

- Worked on a hierarchical multi-label classification problem with 268 categories. Improved the f1-score by 49% with multiple statistical and deep learning methods.
- Improved the performance of model pre-training, fine-tuning, and online serving pipelines.

TEACHING

- Teaching assistant, UCLA CS 33, Introduction to Computer Organization, Fall 2023, with Prof. Glenn Reinman.

SERVICES

- Reviewer: ACL 2023, EMNLP 2023, AAAI 2023/2024