DI WU

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EDUCATION

University of California, Los Angeles — Los Angeles, CA
Ph.D. in Computer Science — 09/2022-Present
UCLANLP Group (with Prof. Kai-Wei Chang)

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

University of California, Los Angeles — Los Angeles, CA
B.S. in Computer Science, Summa Cum Laude — 08/2018-06/2022

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

RESEARCH EXPERIENCE

UCLA NLP Lab — Los Angeles, CA
Student Researcher, Supervisor: Prof. Kai-Wei Chang — 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 — Los Angeles, CA
Student Research Assistant, Supervisor: Prof. Aydogan Ozcan — 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 Chang, K. W. (2023). Rethinking Model Selection and Decoding for Keyphrase Generation with Pre-trained Sequence-to-Sequence Model. *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 — New York, NY, USA
Applied Scientist Intern, Mentor: Wasi Ahmad, Dejiao Zhang — 06/2023 - 09/2023

- Research on improving retrieval-augmented code language models for repository-level code completion.
- Formulate the task of selective retrieval-augmented infilling. Design approaches from the perspective of in-repository code retrievers and the code generator models.

Microsoft Research Asia Beijing, China
Research Intern, Mentor: Ning Shang 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 Beijing, China
Natural Language Processing Intern 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