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, efficient methods for NLP, and human-in-the-loop NLP**

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 Research Assistant, Supervisor: Prof. Kai-Wei Chang — **02/2021 - present**

- **Research on retrieval-augmented low-resource keyphrase generation.**
- **Research on keyphrase generation with pre-trained language models.**
- **Coorperate 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. (2022). Pre-trained Language Models for Keyphrase Generation: A Thorough Empirical Study. *ArXiv 2022*.

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

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.**

LANGUAGE AND SKILLS

Programming	**C, C++, Python, shell, OCaml, Scheme, Verilog, MATLAB**
Machine Learning	**NumPy, TensorFlow, PyTorch, pandas, scikit-learn, Matplotlib**
Language	**Mandarin (Native), English (Professional), Japanese (Beginner)**
GRE	**337 (V: 167/98%; Q: 170/96%; AW: 4.5/81%)**
Hobbies	**Air Traffic Control, Flight Simulation**