YANDA CHEN

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EDUCATION

Columbia University **New York, NY** **Sep 2021 – Present**
Ph.D. in Computer Science GPA: 4.0 / 4.0

Columbia University **New York, NY** **Aug 2017 – May 2021**
B.S. in Computer Science GPA: 4.0 / 4.0

PUBLICATIONS

[1] **Yanda Chen,** Chandan Singh, Xiaodong Liu, Simiao Zuo, Bin Yu, He He, Jianfeng Gao. Towards Consistent Natural-Language Explanations via Explanation-Consistency Finetuning. 2024. *ArXiv*.

[1] **Yanda Chen,** Ruiqi Zhong, Narutatsu Ri, Chen Zhao, He He, Jacob Steinhardt, Zhou Yu, Kathleen McKeown. Do Models Explain Themselves? Counterfactual Simulatability of Natural Language Explanations. 2023. *ArXiv*.

[2] **Yanda Chen**, Chen Zhao, Zhou Yu, Kathleen McKeown, He He. On the Relation between Sensitivity and Accuracy in In-context Learning. *EMNLP 2023 Findings*.

[3] Yukun Huang, **Yanda Chen**, Zhou Yu, Kathleen McKeown. In-context Learning Distillation: Transferring Few-shot Learning Ability of Pre-trained Language Models. 2022. *ArXiv*.

[4] **Yanda Chen**, Ruiqi Zhong, Sheng Zha, George Karypis, He He. Meta-learning via Language Model In-context Tuning. *ACL 2022.*

[5] **Yanda Chen**, Chris Kedzie, Suraj Nair, Petra Galuscakova, Rui Zhang, Douglas Oard, Kathleen McKeown. Cross-language Sentence Selection via Data Augmentation and Rationale Training. *ACL 2021*.

[6] **Yanda Chen**, Md Arafat Sultan, Vittorio Castelli. Improved Synthetic Training for Reading Comprehension. 2020. *ArXiv.*

[7] Ruiqi Zhong, **Yanda Chen**, Desmond Patton, Charlotte Selous, Kathleen McKeown. Detecting and Reducing Bias in a High Stakes Domain. *EMNLP 2019.*

HONORS

- Avanessians Doctoral Fellowships for Engineering Thought Leaders and Innovators in Data Science. 2023.
- Mudd Doctoral Fellowship, Columbia SEAS. 2021.
- Honorable Mention, CRA Undergraduate Research Awards. 2021.
- Theodore R. Bashkow Research Award, Columbia Computer Science Dept. 2021.

INDUSTRY EXPERIENCE

Microsoft Research **Jun 2023 – Sep 2023**

Research Intern at Deep Learning group

- Proposed to improve the counterfactual simulatability of natural language explanations by training on augmented counterfactuals. (Ongoing)

- Studied model representations that encode explanation simulatability.

Amazon Web Services (AWS) AI **Jun 2021 – Sep 2021**

Research Intern at NLP group

- Proposed a novel few-shot meta-learning method called in-context tuning, where training examples are used as prefix in-context demonstrations during task adaptation.
- Showed that in-context tuning out-performs MAML in terms of both accuracy and optimization stability.
- Demonstrated that in-context tuning can eliminate well-known artifacts of few-shot language model prompting such as over-sensitivity to example ordering, example selection and instruction wording.

IBM Research **Jun 2020 – Sep 2020**

Research Intern at NLP group

- Explored novel synthetic training methods under the setting of machine reading comprehension.
- Proposed targeted synthetic training where a carefully selected subset of synthetic training examples improves model performance.
- Invented synthetic knowledge distillation and showed that distillation with synthetic training examples can close the performance gap between small student models and large teacher models.

Microsoft **Jun 2018 – Aug 2018**

Premier Field Engineer at AI group

- Designed and built prediction models for a medicine manufacture company to predict future dates of machinery breakdown based on time sequences of operational machinery data.
- Applied machine learning and deep learning models including GBDT, CNN and LSTM for data analysis.
- Mitigated the label imbalance challenge with various under-sampling and over-sampling techniques
- Achieved a macro-F1 score of 0.88 on a held-out test set.

COURSES

Natural Language Processing, Deep Learning, Computer Vision, Machine Learning, Advanced Machine Learning, Algorithms for Massive Data, Randomized Algorithms, Analysis of Algorithms, Computational Learning Theory, Graphical Models, Social Network Analysis, Real Analysis, Abstract Algebra

TEACHING EXPERIENCE

Natural Language Processing (CS 4705)

- Spring 2022: Taught by Prof. Zhou Yu
- Spring 2021: Taught by Prof. Kathleen McKeown

Analysis of Algorithms (CSOR 4231)

- Spring 2021: Taught by Prof. Clifford Stein
- Spring 2020: Taught by Prof. Eleni Drinea

SKILLS

- Programming Languages: Python, Java, MySQL, C, C++
- Tools: PyTorch, HuggingFace, TensorFlow, Keras, Microsoft CNTK, OpenCV, Android Studio