TIANLE WANG

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EDUCATION

University of California, San Diego (UCSD) — **San Diego, CA, USA**
Master of Science in Data Science — Sept. 2023 – Jun. 2025 (Expected)

- Advised by Prof. Jingbo Shang
- My research interests lie in natural language processing and broad machine learning.

Shanghai Jiao Tong University (SJTU) — **Shanghai, China**
Bachelor of Engineering in Computer Science — Sept. 2019 – Jun. 2023

- Member of **ACM Honors Class**, which is an elite program for top 5% talented students
- GPA: 3.7/4.0

PUBLICATION

1. **Tianle Wang**, Zihan Wang, Weitang Liu and Jingbo Shang "WOT-Class: Weakly Supervised Open-world Text Classification", *CIKM 2023*
2. Zihan Wang*, **Tianle Wang***, Dheeraj Mekala and Jingbo Shang "A Benchmark on Extremely Weakly Supervised Text Classification: Reconcile Seed Matching and Prompting Approaches", *ACL 2023 Findings*
3. Tianxing He, Jingyu Zhang, **Tianle Wang**, Sachin Kumar, Kyunghyun Cho, James Glass and Yulia Tsvetkov "On the Blind Spots of Model-Based Evaluation Metrics for Text Generation", *ACL 2023*

RESEARCH EXPERIENCE

SLS Lab, Massachusetts Institute of Technology — **Cambridge, MA, USA**
Research Intern, advised by **Prof. James Glass** and **Dr. Tianxing He** — Jul. 2022 – Jan. 2023

- Blindspots in PLM-based NLG Metrics
  - Revealed the lack of robustness checks on recent popular PLM-based NLG metrics (e.g., BERTScore) and designed a comprehensive evaluation system by sanity checks with synthetic data
  - Identified a number of interesting insensitivities, biases, or even loopholes from various metrics by synthesizing different types of checks, including general linguistic property check (e.g., linguistic fluency) and inductive bias check of the language model (e.g., self-gen bias)
  - Investigated the reasons for the undesirable behaviors of certain metrics and conducted analysis on how to alleviate them in practice
  - Accepted by *ACL 2023*

SDLab, University of California, San Diego — **La Jolla, CA, USA**
Research Intern, advised by **Prof. Jingbo Shang** — Aug. 2021 – Jul. 2022

- Weakly Supervised Open-world Text Classification
  - Introduced and analyzed the weakly supervised open-world classification task in the text domain for the first time, and revealed the limitations of other methods in open-world settings
  - Proposed a novel method WOT-Class which jointly performed class identification and document classification in a mutually improving manner
  - Achieved stable and imbalance-tolerant learning in open-world settings and gained a 23.33% greater average absolute macro-F1 over the current best method across all datasets.
  - Accepted by *CIKM 2023* as first author
- Benchmark for Extremely Weakly Supervised Text Classification
  - Built a benchmark for comparing different extremely weakly supervised text classification methods, particularly representation learning methods and prompt-based methods, which were almost never compared fairly before

- Conducted a thorough analysis of the factors that affect the performance of each method, including dataset type, prompt, class name, and the impact of PLM on prompt-based methods
- Accepted by *ACL 2023* as co-first author

SELECTED HONORS AND AWARDS

Irving T. Ho Memorial Scholarship
One of the 4 winners in SJTU   2022
Zhiyuan Honorary Scholarship
Top 5% in SJTU   2019 - 2022
Silver Medal
Top 150 in The 34th China's National Olympiad in Informatics (NOI)   2017

TEACHING EXPERIENCE

Teaching Assistant   Spring 2021
Data Structures (CS 152), *SJTU*

- Gave lectures on algorithms and programming problems for undergraduates and designed the course exam

Teaching Assistant   Fall 2020
Great Ideas in Computer Science (CS 163), *SJTU*

- Designed and prepared for the course project on the Turing machine for undergraduate students

SELECTED PROJECTS

⭮ **x-TC**   Fall 2022
Benchmark, Text Classification

- An implementation of our *ACL* paper
- Built a benchmark for comparing different extremely weakly supervised text classification methods
- User-friendly to edit the framework and incorporate novel methods and datasets

⭮ **WOT-Class**   Spring 2022
Text Classification, Open-world Learning

- An implementation of our *CIKM* paper
- Designed an iterative refinement framework that achieved state-of-the-art performance in weakly supervised open-world text classification settings

SKILLS

- Programming Languages: C/C++, Python, Java, Verilog, Assembly, MATLAB, Pascal
- Tools and Frameworks: Git, PyTorch, TensorFlow, Docker, Vivado, Markdown, LaTeX