

Tianlu Wang

Rice Hall 430, 85 Engineer's Way, Charlottesville, VA 22903
tianlu@virginia.edu • +1 (434) 249-9906 • <http://www.cs.virginia.edu/~tw8cb/>

RESEARCH INTERESTS

I am interested in topics concerning fairness, robustness and accountability in machine learning models.

EDUCATION

University of Virginia, Charlottesville, Virginia, USA Aug 2016 – present

Ph.D. in Computer Science

Advisor: Prof. Vicente Ordonez Roman

Focus: Learning Fair and Robust Visual Representations.

Zhejiang University, Hangzhou, Zhejiang, China Aug 2012 – Jun 2016

B.S. in Computer Science and Technology

Advisor: Prof. Fei Wu

Thesis: Active Learning of Name Tagger for Low-Resource Languages

EXPERIENCE

Facebook AI Research (FAIR), Menlo Park, CA Jun 2020 – Sep 2020

Research Intern

Focus: Improving active learning by reducing sampling bias.

Mentor: Alex Berg

Google Brain, New York, NY Mar 2020 – May 2020

Research Intern, SIR Group

Focus: Improving robustness of NLP models.

Mentor: Xuezhi Wang, Manager: Alex Beutel

Salesforce Research, Palo Alto, CA May 2019 – Aug 2019

Deep Learning Research Intern

Focus: Debiasing Word Embeddings.

Mentor: Victoria Lin & Nazneen Fatema Rajani, Manager: Caiming Xiong

eBay Research Labs, San Francisco, CA May 2018 – Aug 2018

Research Intern, Computer Vision Group

Focus: Implementation of modern object detection systems in Pytorch.

Mentor: Hadi Kiapour & Shuai Zheng, Manager: Robinson Piramuthu

Rensselaer Polytechnic Institute, Troy, NY Aug 2015 – Feb 2016

Research Intern, NLP Group

Focus: Deployment of active learning algorithms for low-resource languages.

Advisor: Prof. Heng Ji

AWARDS & SCHOLARSHIPS

Presidential Fellows in Data Science, University of Virginia 2019-2020

Graduate Student Award for Outstanding Research, University of Virginia 2018

Best Long Paper Award, Empirical Methods in Natural Language Processing (EMNLP) 2017

First Prize, Scholarship for Outstanding Students Basic Disciplines, Zhejiang University 2013– 2015

Excellent All-around Student, Zhejiang University 2013– 2015

PREPRINTS

Jack Lanchantin, **Tianlu Wang**, Vicente Ordonez, Yanjun Qi. “General Multi-label Image Classification with Transformers”, arxiv. Nov. 2020

Fuxiao Liu, Yinghan Wang, **Tianlu Wang**, Vicente Ordonez. “*VisualNews : Benchmark and Challenges in Entity-aware Image Captioning*”, arxiv. Oct. 2020

PUBLICATIONS

Tianlu Wang, Xuezhi Wang, Yao Qin, Ben Packer, Kang Li, Jilin Chen, Alex Beutel and Ed Chi. “*CAT-Gen: Improving Robustness in NLP Models via Controlled Adversarial Text Generation*”, Empirical Methods in Natural Language Processing. **EMNLP’ 2020**, short paper. Nov. 2020

Tianlu Wang, Xi Victoria Lin, Nazneen Fatema Rajani, Bryan McCann, Vicente Ordonez, Caiming Xiong. “*Double-Hard Debias: Tailoring Word Embeddings for Gender Bias Mitigation*”, Association for Computational Linguistics. **ACL’ 2020**. Seattle, Washington. July 2020.

Tianlu Wang, Jieyu Zhao, Mark Yatskar, Kai-Wei Chang, Vicente Ordonez. “*Balanced Datasets Are Not Enough: Estimating and Mitigating Gender Bias in Deep Image Representations*”, International Conference on Computer Vision. **ICCV’ 2019**. Seoul, South Korea. October 2019.

Jieyu Zhao, **Tianlu Wang**, Mark Yatskar, Ryan Cotterell, Vicente Ordonez, Kai-Wei Chang. “*Gender Bias in Contextualized Word Embeddings*”, North American Chapter of the Association for Computational Linguistics. **NAACL’2019**, short paper. Minneapolis, Minnesota. USA.

Tianlu Wang, Kota Yamaguchi, Vicente Ordonez. “*Feedback-prop: Convolutional Neural Network Inference under Partial Evidence*”, Intl. Conference on Computer Vision and Pattern Recognition. **CVPR’2018**. Salt Lake City, Utah, USA.

Jieyu Zhao, **Tianlu Wang**, Mark Yatskar, Vicente Ordonez, Kai-Wei Chang. “*Gender Bias in Coreference Resolution: Evaluation and Debiasing Methods*”, North American Chapter of the Association for Computational Linguistics. **NAACL’2018**, short paper. New Orleans, Louisiana, USA.

Jieyu Zhao, **Tianlu Wang**, Mark Yatskar, Vicente Ordonez, Kai-Wei Chang. “*Men Also Like Shopping: Reducing Gender Bias Amplification using Corpus-level Constraints*”, Empirical Methods in Natural Language Processing. **EMNLP’2017**. Copenhagen, Denmark. **Best Long Paper Award**

Boliang Zhang, Xiaoman Pan, **Tianlu Wang**, Ashish Vaswani, Heng Ji, Kevin Knight and Daniel Marcu, “*Name Tagging for Low-resource Incident Languages based on Expectation-driven Learning*”, The North American Chapter of the Association for Computational Linguistics, **NAACL’2016**. San Diego, California, USA

PRESENTATIONS

Gender Bias in Image Representations: Evaluation and Debiasing Method

Poster presentation at Amazon Graduate Research Symposium, Seattle, WA.

Mar 2019

Overcoming Bias and Stereotypes

Oral presentation at Fairness Seminar, University of Virginia

Nov 2018

Feedback-prop: Convolutional Neural Network Inference under Partial Evidence

Poster presentation at Women in Machine Learning Workshop, NIPS 2017, Long Beach, CA

Nov 2017

Images and Text

Oral presentation at Human and Machine Intelligence Seminar, University of Virginia

Oct 2017

What else is there? Deep multi-label prediction under incomplete labels

Poster presentation at Mid-Atlantic Student Colloquium on Speech, Language and Learning MASC-SLL 2017, Washington, DC

May 2017

Visual Recognition with Mixed Pixel and Categorical Inputs

Oral presentation at Image Processing Seminar, University of Virginia

Apr 2017

PROFESSIONAL SERVICE

Reviewer

International Conference on Natural Language Processing and Chinese Computing (NLPCC)	2020
Empirical Methods in Natural Language Processing (EMNLP)	2020
Association for Computational Linguistics (ACL)	2020
European Conference on Computer Vision (ECCV)	2020
Intl. Conference on Computer Vision and Pattern Recognition (CVPR)	2020
IEEE International Conference on Computer Vision (ICCV)	2019
North American Chapter of the Association for Computational Linguistics (NAACL)	2019
Transactions of Pattern Analysis and Machine Intelligence (TPAMI)	2018, 2019

Teaching

Teaching Assistant: Software Development Methods (UVA CS 2110)	Aug 2016– May 2017
Teaching Assistant: Electronic Commerce (UVA CS 4753)	Aug 2016– Dec 2016
Teaching Assistant: Vision & Language (UVA CS 6501-004)	Jan 2017– May 2017
Teaching Assistant: Computational Visual Recognition (UVA CS 6501-009)	Aug 2017– Dec 2017
Teaching Assistant: Deep Learning for Visual Recognition (UVA CS 6501-004)	Jan 2019– May 2019

Volunteer

International Conference on Very Large Data Bases (VLDB 2014)

[Last updated: 2020-12-02]