

WENLONG DENG

5500-2332 Main Mall, Vancouver, BC Canada V6T 1Z4

☎ +1-7782665666 ✉ dengwenlong49@gmail.com 🌐 [wenlong](https://www.wenlong.com)

EDUCATION BACKGROUND

University of British Columbia(UBC)

Ph.D. in Electrical and Computer Engineering

Supervisors: Prof. Xiaoxiao Li & Prof. Christos Thrampoulidis

Sep. 2022 - Sep. 2026(expected)

Vancouver, Canada

Vector Institute

Ph.D. Researcher

Sep. 2023 - Sep. 2025(expected)

Toronto, Canada

Swiss Federal Institutes of Technology in Lausanne

MSc in Electrical Engineering

GPA: 5.4/6.0 Rank: 7/42 Specialization in Data and Information Technology

Sep. 2017 - Nov. 2019

Lausanne, Switzerland

University of Electronic Science and Technology of China

B.E. in Electronic Information Engineering

GPA 3.9/4.0 Rank: 5/368

Sep. 2013 - June 2017

Chengdu, China

SELECT PUBLICATIONS & SUBMISSIONS

- **Wenlong Deng**, Yize Zhao, Vala Vakilian, Minghui Chen, Xiaoxiao Li, Christos Thrampoulidis. DARE the Extreme: Revisiting Delta-Parameter Pruning For Fine-Tuned Models. (**Spotlight Top 5%**) ICLR 2025
- **Wenlong Deng(co-first)***, Jiayi Yang*, Benlin Liu, Yangsibo Huang, James Zou and Xiaoxiao Li. GMValuator: Similarity-based Data Valuation for Generative Models. ICLR 2025
- Minghui Chen, Ruinan Jin, **Wenlong Deng**, Yuanyuan Chen, Zhi Huang, Han Yu, Xiaoxiao Li. Can Textual Gradient Work in Federated Learning? ICLR 2025
- Ruinan Jin, **Wenlong Deng**, Minghui Chen, and Xiaoxiao Li. Debaised noise editing on foundation models for fair medical image classification. *International Conference on Medical Image Computing and Computer-Assisted Intervention*, 2024
- **Wenlong Deng**, Blair Chen, Xiaoxiao Li and Christos Thrampoulidis. Content Conditional Debiasing for Fair Text Embedding. *Under Review*
- **Wenlong Deng**, Christos Thrampoulidis, and Xiaoxiao Li. Unlocking the potential of prompt-tuning in bridging generalized and personalized federated learning. *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024
- **Wenlong Deng**, Yuan Zhong, Qi Dou, and Xiaoxiao Li. On fairness of medical image classification with multiple sensitive attributes via learning orthogonal representations. In *International Conference on Information Processing in Medical Imaging*, pages 158–169. Springer, 2023 (Accept rate 25%)
- Beidi Zhao, **Wenlong Deng**, Zi Han, Chen Zhou, Zuhua Gao, Gang Wang, Xiaoxiao Li, et al. Less: Label-efficient multi-scale learning for cytological whole slide image screening. *Medical Image Analysis (IF:10.9)*, 2024
- Anushree Bannadabhavi, Soojin Lee, **Wenlong Deng**, Rex Ying, and Xiaoxiao Li. Community-aware transformer for autism prediction in fmri connectome. In *International Conference on Medical Image Computing and Computer-Assisted Intervention*, pages 287–297. Springer, 2023
- **Wenlong Deng**, Lorenzo Bertoni, Sven Kreiss, and Alexandre Alahi. Joint human pose estimation and stereo 3d localization. In *2020 IEEE International Conference on Robotics and Automation (Rank A)*, pages 2324–2330, 2020
- **Wenlong Deng**, Y. Mou, T. Kashiwa, S. Escalera, K. Nagai, K. Nakayama, Y. Matsuo, and H. Prendinger. Vision based pixel-level bridge structural damage detection using a link aspp network. *Automation in Construction (IF:10.5)*, 110:102973, 2020

- Rúben Geraldés, Artur Gonçalves, Tin Lai, Mathias Villerabel, **Wenlong Deng**, Ana Salta, Kotaro Nakayama, Yutaka Matsuo, and Helmut Prendinger. Uav-based situational awareness system using deep learning. *IEEE Access (IF:3.47)*, 7:122583–122594, 2019
- Juan Jose Rubio, Takahiro Kashiwa, Teera Laiteerapong, **Wenlong Deng**, Kohei Nagai, Sergio Escalera, Kotaro Nakayama, Yutaka Matsuo, and Helmut Prendinger. Multi-class bridge structural damage segmentation using fully convolutional networks. *Computers in Industry (IF:11.2)*, 112:103121, 2019

WORK EXPERIENCE

Meta - Research Scientist Intern

June 2025 – Oct. 2025 (Incoming)

LLM Prompt Auto Optimization

Meta GenAI

Google - Student Researcher

Oct 2023 – April 2024

Document Embedding AI

Google Cloud

Fair Document Embedding: We achieve fairness while maintaining utility trade-off by ensuring conditional independence between sensitive attributes and text embeddings conditioned on the content. Specifically, we enforce that embeddings of texts with different sensitive attributes but identical content maintain the same distance toward the embedding of their corresponding neutral text. Furthermore, we address the issue of lacking proper training data by using Large Language Models (LLMs) to augment texts into different sensitive groups.

TikTok - Algorithm Engineer

March 2021 – April 2022

CVR Estimation Optimization

TikTok Ads

- Auto Feature Interaction: Optimize TikTok ads cvr model with the self-ensemble neural network and skip connect with row feature to introduce low-level feature interaction. Furtherly introduced high-level interactions by using element-wise multiplication/V-DCN within/in the ensemble networks. Algorithm improved offline AUC by 0.3%, brought 7.5% advertisement value(revenue) to TikTok AEO Ads and got 1.4% revenue gain for overall TikTok Ads.
- Model Smoothness Optimization: Proposed a SML module to introduce skip connection mechanism into the CTR prediction model thus improving DNN's optimization ability and fully stimulating DNN's expressive ability. With the help of theoretical proof and experimental analysis, the benefit of the proposed module is supported. By incrementally adding the SML module to the selected state of the art methods, consistent performance gains are observed.

TikTok - Algorithm Engineer

Feb. 2020 – Feb. 2021

Search Relevation Optimization

TikTok Search

- Content Embedding Implement SOTA text+video understanding methods to produce content embedding. Insert the obtained embedding into ctr estimation model and improve the NDCG performance of search results.
- Unsupervised Text Classification with Graph-Cut: Built a graph with lyric words as nodes and search query as prior information, combing with the user behavior information, trained a graph-cut model to extract completed lyrics from video titles. Linked lyric-like search queries with videos whose audio contains the lyric. Boost the search performance by 5%.

AWARDS

NeurIPS Top Reviewer

2024

Vector Research Grant

2024

Graduate Support Initiative (GSI) Award

2023

Faculty of Applied Science Graduate Award

2022

TikTok Bi-Monthly Technology Star (top 1%)

2021

Radio Hacking Europe Competetion 2nd Prize (#2)

2019

Outstanding Graduate of University of Electronic Science and Technology of China (Top 5%)

2017

Best Graduation Paper Work Prize of University of Electronic Science and Technology of China

2017

People's First Scholarship (Top 5%)

2015-2017

China Undergraduate Mathematical Contest in Modeling First Prize (Top 1%)

2015

SERVES

PC member of FL@FM-IJCAI'24 and FL@FM-ICME'24

2024

Reviewer of Medical Image Analysis, MICCAI, NeurIPS, ICLR, ICML, AISTATS, TMLR

2023-now