Junwei (Jeremy) Ma

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EXPERIENCE

Layer6 AI/TD Bank
Machine Learning Scientist — *Jan 2019 - Present*

- **Research**: Published papers in top conferences.
- **Infrastructure**: Designed and implemented high-performance in-house machine learning framework. Provided multi-gpu deep learning, computer vision and natural language processing functionalities.
- **Use Cases**: Created machine learning models for banking systems such as mortgage pre-approval. Worked with business to define funtional requirements. Provided explainable insights of deep learning and xgboost models.

Modiface
Machine Learning Research Intern — *May 2018 - Dec 2018*

- **Machine Learning Research**: Focused on model compression and computer vision

Analog Devices Inc.
FPGA and Embedded Software Intern — *May 2015 - Aug 2016*

- **FPGA and Embeded Systems**: Optimized high speed digital signal processing software and hardware

PUBLICATIONS

TabPFGen – Tabular Data Generation with TabPFN — NeurIPS 2023
J Ma, A Dankar, G Stein, G Yu, A Caterini

X-Pool: Cross-Modal Language-Video Attention for Text-Video Retrieval — CVPR 2022
SK Gorti*, N Vouitsis*, J Ma*, K Golestan, M Volkovs, A Garg, G Yu

Weakly Supervised Action Selection Learning in Video — CVPR 2021
J Ma*, SK Gorti*, M Volkovs, G Yu

Cross-Class Relevance Learning for Temporal Concept Localization — ICCV 2019
J Ma*, SK Gorti*, M Volkovs, I Stanevich, G Yu

Semi-Supervised Exploration in Image Retrieval — CVPR 2019
C Chang, H Rai, SK Gorti, J Ma, C Liu, G Yu, M Volkovs

Guided similarity separation for image retrieval — NeurIPS 2019
C Liu, G Yu, M Volkovs, C Chang, H Rai, J Ma, SK Gorti

Text-to-image-to-text translation using cycle consistent adversarial networks — Arxiv 2018
J Ma*, SK Gorti*

COMPETITION

Kaggle Competitions Master: kaggle.com/junweima
World Rank: 168th

- **YouTube Video Understanding Challenge 2019**: 1st place
- **Google Landmark Retrieval Challenge 2019**: 3rd place
- **Google Landmark Retrieval Challenge 2020**: 10th place
- **Google Landmark Recognition Challenge 2020**: 58th place

EDUCATION

University of Toronto
Master of Science in Applied Computing; GPA: 4.00 — *Sep. 2017 – Jan. 2019*

- **Teaching Assistant**: Algorithm and Data Structure

University of Toronto
Bachelor of Science in Electrical and Computer Engineering; GPA: 3.77 — *Sep. 2012 – May. 2017*