Tingyu Qu

[Email] • [Google Scholar] • [GitHub] • [Homepage]

Education

KU Leuven Leuven, Belgium
Ph.D. in Computer Science *Sept.2020 - present*
- Advisor: Prof. Marie-Francine Moens & Prof. Tinne Tuytelaars
- Research Interests: Multimodal Machine Learning, Vision-Language, Language Generation, Generative Models

KU Leuven Leuven, Belgium
Master of Artificial Intelligence *Sept.2019 - Sept.2020*
- Thesis: Autoencoder with Multi-directional Ensemble of Regression and Classification Trees (MERCS) (Advisor: Prof. Hendrik Blockeel)

KU Leuven Leuven, Belgium
Master of Statistics *Sept.2017 - Jun.2019*
- Thesis: Mining Health Records Using Machine Learning Methods (Advisor: Prof. Bart De Moor)

Hebei University Baoding, China
Bachelor of Mathematics and Applied Mathematics *Sept.2013 - Jun.2017*
- *Academic scholarship*: Academic year 2014-2015, 2015-2016
- *Merit Student*: (Top 5% students in Department of Mathematics), Academic year 2015-2016
- Thesis: Application of Concept Lattice in Data Mining (Advisor: Prof. Hua Mao)

Publication

- **Tingyu Qu**, Tinne Tuytelaars, & Marie-Francine Moens. Introducing Routing Functions to Vision-Language Parameter-Efficient Fine-Tuning with Low-Rank Bottlenecks. *Preprint. 2024.* [Paper]
- Mingxiao Li*, **Tingyu Qu***, Ruicong Yao, Wei Sun, & Marie-Francine Moens. Alleviating Exposure Bias in Diffusion Models through Sampling with Shifted Time Steps. *International Conference on Learning Representations (ICLR 2024).* [Paper] [Code (DDPM ver.)][Code (ADM ver.)]
- **Tingyu Qu**, Tinne Tuytelaars, & Marie-Francine Moens. Visually-Aware Context Modeling for News Image Captioning. *In Proceedings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies. (NAACL 2024).* [Paper] [Code]
- **Tingyu Qu**, Tinne Tuytelaars, & Marie-Francine Moens. Weakly Supervised Face Naming With Symmetry-Enhanced Contrastive Loss. *In Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV 2023).* [Paper] [Code]
- Xi Shi, **Tingyu Qu**, Gijs Van Pottelbergh, Marjan van den Akker & Bart De Moor. A Resampling Method to Improve the Prognostic Model of End-Stage Kidney Disease: A Better Strategy for Imbalanced Data. *Frontiers in Medicine (2022).* (Journal version of MStat thesis). [Paper]

* denotes equal contribution

Service

Reviewer: ACL23, CVPR24, BMVC24, TPAMI

Skills

Programming Languages: Python (Mainly use PyTorch for research), R, MATLAB
Languages: Mandarin (Native), English (Full proficiency)

Reference

Prof. Marie-Francine Moens (sien.moens@kuleuven.be), full professor, Department of Computer Science, KU Leuven
Prof. Tinne Tuytelaars (tinne.tuytelaars@kuleuven.be), full professor, Department of Electrical Engineering, KU Leuven