# Yifang YIN

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## Education

2011-2016    **Doctor of Philosophy**
School of Computing, National University of Singapore

2007-2011    **Bachelor of Science**
Computer Science and Technology, Northeastern University, Shenyang, China

## Work Experience

Jun. 2018 – Present    **Senior Research Fellow**
Institute of Data Science, National University of Singapore.

Aug. 2016 – Jun. 2018    **Research Fellow**
School of Computing, National University of Singapore.

Oct. 2014 – Mar. 2015    **Research Internship**
Incubation Centre, Research and Technology Group,
Fuji Xerox Co., Ltd., Japan.

## Teaching Experience

NUS      Teaching Assistant for module *CS4243 Computer Vision and Pattern Recognition*

NUS      Teaching Assistant for module *CS5240 Theoretical Foundations in Multimedia*

## Research Experience

**Machine Learning based Automatic Map Inference (2018-present)**: Collaborated with our partner Grab, this project aims at leveraging data from the Grab platform to solve complex, real-world challenges in Southeast Asia. Through the use of AI algorithms, Grab's wealth of data can bring forth meaningful insights, such as building richer maps and modelling traffic conditions.

**Deep Learning Based Acoustic Modelling (2017-present)**: We are constantly surrounded by sounds and we rely heavily on these sounds to obtain important information about what is happening around us. This project investigates state-of-the-art sound analysis including sound event detection and acoustic scene classification, which has a significant impact in real-world applications including smart cities, surveillance, robotic navigation, and context-aware service.

**Sensor-Rich Video Management System (2011-2016)**: With advances in the technology of mobile device manufacturing and network engineering, user-generated videos have become very popular in recent years. This project investigates the use of sensor data such as GPS and compass values associated with videos for robust and efficient video annotation and retrieval by conjunctively considering both the geographic and visual information.

# Selected Publications,

- **Yifang Yin,** Harsh Shrivastava, Ying Zhang, Zhenguang Liu, Rajiv Ratn Shah, Roger Zimmermann, "Enhanced Audio Tagging via Multi- to Single-Modal Teacher-Student Mutual Learning". In AAAI 2021.
- Ying Zhang, **Yifang Yin**, Zhenguang Liu, Roger Zimmermann, "A Spatial Regulated Patch-Wise Approach for Cervical Dysplasia Diagnosis". In AAAI 2021.
- **Yifang Yin,** Jagannadan Varadarajan, Guanfeng Wang, Xueou Wang, Dhruva Sahrawat, Roger Zimmermann, See-Kiong Ng**,** "A Multi-task Learning Framework for Road Attribute Updating via Joint Analysis of Map Data and GPS Traces". In WWW 2020
- Yaman Kumar, Dhruva Sahrawat, Shubham Maheshwari, Debanjan Mahata, Amanda Stent, **Yifang Yin**, Rajiv Ratn Shah, Roger Zimmermann, "Harnessing GANs for Zero-shot Learning of New Classes in Visual Speech Recognition". In AAAI 2020.
- Zhenguang Liu, Sihao Hu, **Yifang Yin**, Jianhai Chen, Kevin Chiew, Luming Zhang, Zetian Wu, "Interactive Rare-Category-of-Interest Mining from Large Datasets". In AAAI 2020.
- **Yifang Yin**, Meng-Jiun Chiou, Zhenguang Liu, Harsh Shrivastava, Rajiv Ratn Shah, Roger Zimmermann, "Multi-Level Fusion based Class-aware Attention Model for Weakly Labeled Audio Tagging". In ACM Multimedia 2019.
- Yaman Kumar, Rohit Jain, Khwaja Mohd. Salik, Rajiv Ratn Shah, **Yifang Yin**, Roger Zimmermann, "Lipper: Synthesizing Thy Speech Using Multi-View Lipreading". In AAAI 2019.
- **Yifang Yin**, Rajiv Ratn Shah, Roger Zimmermann, "Learning and Fusing Multimodal Deep Features for Acoustic Scene Categorization". In ACM Multimedia, 2018.
- **Yifang Yin,** Guanfeng Wang, Roger Zimmermann, "Automatic geographic metadata correction for sensor-rich video sequences". In ACM SIGSPATIAL, 2016.
- **Yifang Yin,** Yi Yu, Roger Zimmermann, "On Generating Content-Oriented Geo Features for Sensor-Rich Outdoor Video Search". In IEEE Transactions on Multimedia (IEEE TMM), 2015.

# Selected Awards

- Recipient of the **Best Paper Award** at ACM SIGSPATIAL Workshop on GeoAI, 2019.
- Recipient of the **Best Paper Runner-up** at ACM SIGSPATIAL Workshop on PredictGIS, 2019.
- Recipient of the **Best Demo Award** at IEEE BigMM conference, 2019.
- Recipient of the **Best Poster Runner-up** at IEEE ISM 2018.
- Recipient of the **Best Paper Award** at ACM SIGSPATIAL Workshop on GeoStreaming, 2016.

# Selected Professional Activities

- **Co-chair**: IEEE BigMM (2019, 2020), MR2AMC (2018,2019)
- **PC Member**: AAAI (2020), IJCAI (2019, 2021), ACM MM (2017, 2018), ICME (2019-2021)
- **Reviewer**: TKDE, TCSVT, TOMM, Aplied Optics, UbiComp (2016)

# Reference

Associate Professor Roger Zimmermann
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