QIAOMU MIAO

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EDUCATION

Stony Brook University (SBU), *Stony Brook, NY, USA* — *Sep.2019-Present*
Ph.D. in Computer Science — GPA: 4.0/4.0

Tianjin University (TJU), *Tianjin, China* — *Sep.2016-Jan.2019*
M.S. in Computer Science — GPA: 85.8/100

Tianjin University (TJU), *Tianjin, China* — *Sep.2012-Jul.2016*
B.E. in Computer Science — GPA: 84.1/100

EXPERIENCE

Computer Vision Lab, Stony Brook University — Stony Brook, NY, USA
Research Assistant, advisor: Dimitris Samaras, Minh Hoai Nguyen — *Jun.2020-Present*

Shenyang Institute of Automation, Chinese Academy of Sciences — Shenyang, China
Research Intern — *May2019 - Jul.2019*

Tianjin Key Laboratory of Cognitive Computing and Application, TJU — Tianjin, China
Research Assistant, advisor: Baolin Liu, Gaoyan Zhang — *Sep.2016 - Jan.2019*

PUBLICATIONS

Jin Gu, Baolin Liu, Weiran Yan, **Qiaomu Miao**, and Jianguo Wei. "Investigating the Impact of the Missing Significant Objects in Scene Recognition Using Multivariate Pattern Analysis" *Frontiers in Neurorobotics* 14 (2020).

Qiaomu Miao, Gaoyan Zhang, Weiran Yan, and Baolin Liu. "Investigating the brain neural mechanism when signature objects were masked during a scene categorization task using functional MRI." *Neuroscience* 388 (2018): 248-262.

ACADEMIC PROJECTS

Multi-view Multi-person Close Proximity Estimation — *Jun.2020-Dec.2020*

· Estimated fundamental matrix from keypoints matched in view pairs, extracted 2D poses of each person
· Performed cross-view matching of the same person using appearance and geometry correlations
· Build and train a model to estimate the close proximity for each person
· The model is able to estimate the close proximity well even with noisy and very unbalanced labels

Semi-supervised Action Localization — *Mar.2020-May.2020*

· Combined Sequence-to-Segments Network (S2N) with Mean-Teacher method for action localization
· Achieve comparable performance to fully-supervised S2N model with 80% of labeled data

Nuclei Segmentation with Very Few Images — *May.2019-Jul.2019*

· Cropped patches on the original 32 images and get over 2000 images using various augmentations
· Trained UNet on augmented images and obtained good testing performance for nuclei segmentation

Role of Signature Objects in Scene Categorization — *May.2016-Mar.2018*

· Collected fMRI data of subjects performing a scene categorization task with 'signature objects' masked
· Conducted statistical analyses to investigate the changes in neural activations and functional connectivity
· Wrote and publish papers in Neuroscience and Frontiers in Neurorobotics

User Indentification Based on Breath Signals *Sep.2020-Dec.2020*

- Collected acoustic breath signals from multiple users, obtained the MFCC features extracted by a partner
- Trained an RNN model and obtain 97% accuracy on person identity classification
- Developed a web app using HTML and Javascript for real-time recording, uploading and classification

SKILLS

Programming Languages	Python, C++, Java, Matlab, SQL
Libraries	PyTorch, OpenCV, Numpy, Keras, scikit-learn
Tools	Linux, Git, LaTeX, Adobe Photoshop

AWARDS

Chairman's Fellowship at SBU *Sep.2019*
First-Class Academic Scholarship for Graduate Students at TJU *Nov.2016*
Merit Student of TJU *Oct.2015*
China Computer Federation (CCF) Certified Software Professional (CSP) *Dec.2015*
Ranked top 5.54% among over 6400 participants in the 6_{th} CCF CSP test