GEXIN HUANG

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EDUCATION

South China University of Technology (SCUT) Guangzhou, China
M.S. in School of Automation Science and Engineering Jan. 2018 - Jun. 2021 (expected)
Pattern Recognition and Intelligent System **GPA – 3.30/4.00 (16/100)**

Civil Aviation University of China (CAUC) Tianjin, China
B.S. in College of Electric Information and Automation Sep. 2012 - Jun. 2016
Electronic Engineering **GPA – 3.60/4.00 (10/130)**

WORK EXPERIENCE

Engineer in Xiamen Airlines Co. Xiamen, China
Engineer Candidate for Electronic Systems of Aircraft Aug. 2016 - Oct. 2017

PUBLICATION

- Gexin Huang, Zhuliang Yu, Wei Wu, Ke Liu, Zhenghui Gu, Feifei Qi, Jiawen Liang, and Yuanqing Li
  " Electromagnetic Source Imaging via a Data-Synthesis-Based Denoising Autoencoder ", **arXiv:2010.12876**, 2020

RESEARCH EXPERIENCE

Center for Brain Computer Interfaces and Brain Information Processing SCUT
Advisors: Prof. Zhuliang Yu and Prof. Wei Wu Jan. 2018 - Aug. 2020

- **Neural Inverse Problem with Deep Learning Framework** Jul. 2019 - Aug. 2020
  - Proposed a novel data-enhanced Denoising Auto-Encoder (DAE) method for solving ill-posed inverse problem.
  - Designed a data-enhanced strategy through principal component extraction to incorporate the prior knowledge.
  - Designed customized layers for DAE to better spatio-temporal feature extraction.
- **Multimodal Learning with Generative Bayesian Method** Oct. 2018 - Jun. 2019
  - Proposed a Bayesian generative model to jointly predict the multiple neuroimaging datasets.
  - Constituted the customized architecture of neural network incorporated with the Bayesian model.
  - Built a training framework with iterated optimization at the variational inference and SGD.

Institute of Intelligence and Robotics CAUC
Advisors: Prof. Qinji Gao and Prof. Guocheng Niu Sep. 2013 - Oct. 2016

- **National College Students' Innovation Program** Sep. 2013 - Oct. 2014
  - Collected and Pre-processed the training set with OpenCV to train the upper computer.
  - Extracted HOG features from images and designed the SVM classification model for object detection.
  - Built a control and decision system for UAV to be recognition and trace of multi-pattern ground targets.
- **National University Intelligent Car Competition** Aug. 2014 - Oct. 2015
  - Built the hardware system of upright car and designed its robust control algorithms.
  - Designed the decision algorithms based on the signal and image processing for obstacle avoidance and path tracking.
- **Design of Recognition and Control System based on Optical Biped Robot** Oct. 2015 - Jun. 2016
  - Built the hardware system and interface modules of the optical bipedal robot.
  - Designed the feature extraction and decision algorithms for the object tracking.

RELEVANT COURSEWORK

Advanced mathematics	Probability & Statistics	Complex Variables	Linear Algebra
Pattern Recognition	Machine Learning	Digital Signal Processing	Image Processing

HONORS & AWARDS

- **Series of College Awards** Mar. 2012 - Aug. 2019
  - First and Second Prize Scholarship
  - Excellent Graduate Student Cadres
  - Excellent Student Cadres and Outstanding League Cadres
  - Outstanding Cadres of Student Association
- **Excellence Prize of Intelligent Car in Huabei Division** Feb. 2015
- **Excellece Project Completion for Innovation Program** Feb. 2014