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 (16/120)**

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

Xiamen Airlines Co. Xiamen, China
Engineer for Electronic and Software 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 EXPERIENCES

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

- **Solving EEG Inverse Problem with Deep Learning Framework** Jul. 2019 - Aug. 2020
  - Work was under review at IEEE Transactions on Neural Network and Learning Systems.
  - Proposed a data-driven denoising autoencoder (DAE) to solve ill-posed inverse problem.
  - Designed a data synthesis strategy and customized layers to incorporate the prior knowledge.
- **Multi-modal Neural Signals Learning with Bayesian Deep Learning** Jan. 2018 - Jun. 2019
  - Proposed a generative multiview model to jointly predict the multiple neuroimaging datasets.
  - Constituted the customized architecture of neural network fused with probailistic models.
  - Built an mean-field variational inference optimization framwork with SGD.

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

- **Recognition and Control System for Optical Biped Robot** Oct. 2015 - Jun. 2016
  - Built the hardware system and interface modules of the optical bipedal robot.
- **National University Students Intelligent Car Race** Aug. 2014 - Oct. 2015
  - Awarded Excellence Prize in Huabei division.
  - Built the hardware system of upright car and designed its PID algorithm.
  - Designed the obstacle avoidance and path tracking algorithms via DSP.
- **Detection and Recognition of Ground Targets for Quadrotor UAV** Sep. 2013 - Oct. 2014
  - Published the work in Chinese civil aviation journal and applied a Chinese patent.
  - Built a control and decision system for UAV to detection and trace ground targets.
  - Built the data-augmented training set with OpenCV to train the HOG-SVM model.

RELEVANT COURSEWORKS

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

HONORS & AWARDS

- **Excellence Prize of Intellegent Car Race in Huabei Division** 2015
- **Excellece Project Completion for Innovation Program** 2014
- **Series of College Awards**
  - First Prize Scholarships 2012-2013, 2020
  - Second Prize Scholarships 2014-2015, 2019
  - Excellent Graduate Student Cadres
  - Excellent Student Cadres and Outstanding League Cadres
  - Outstanding Cadres of Student Association