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

Engineer in Xiamen Airlines Co. — Xiamen, China
Engineer Candidate 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
  - Proposed a data-driven denoising autoencoder (DAE) to solve ill-posed inverse problem.
  - Designed a data synthesis strategy to incorporate the prior knowledge.
  - Designed customized layers in DAE to achieive a better spatiotemporal feature extraction.
- **Multi-modal Neural Signals Learning with Bayesian Deep Learning** — Oct. 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 - Oct. 2016

- **Detection and Recognition of Ground Targets for Quadrotor UAV** — Sep. 2013 - Oct. 2014
  - Built a control and decision system for UAV to detection and trace ground targets.
  - Designed a SVM classification model based on HOG features for object detection.
  - Built the data-augmented training set with OpenCV to train the HOG-SVM model.
- **National University Intelligent Car Competition** — Aug. 2014 - Oct. 2015
  - Built the hardware system of upright car and designed its PID algorithm.
  - Designed the obstacle avoidance and path tracking algorithms via DSP.
- **Recognition and Control System for Optical Biped Robot** — Oct. 2015 - Jun. 2016
  - Built the hardware system and interface modules of the optical bipedal robot.
  - Designed the line tracking and decision algorithms for the object tracking.

RELEVANT COURSEWORKS

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 Scholarships
  - 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