

ZHUOWEI HAN

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OBJECTIVE

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SUMMARY OF QUALIFICATIONS

- Extensive background in signal processing & algorithm (including radar, ultrasonic sensor, audio and image).
- Skilled in algorithm design, analysis and optimization techniques. In particular, simulation and modeling experience with Restricted Boltzmann Machine.
- Detail-oriented and passionate self-starter, team-player with expertise in research, programming and troubleshooting.

RESEARCH EXPERIENCE

Master Thesis, Deep Neural Network for learning Speech Emotion Representations

Institute of Signal Processing and System Theory, University of Stuttgart

08/2014-02/2015

- Pre-processed speech emotion signal to extract MFCC features
- Implemented probabilistic graphical model (Conditional RBM) and extracted high-level features for classification
- Optimized network parameter and evaluated the speaker-independent recognition model

Study Thesis, Optimization and Validation of Adaptive Threshold Parameters in Ultra-Sonic Object Detection System

Robert Bosch GmbH

09/2013-03/2014

- Learned state of the art object detection techniques with ultra-sonic sensors in Driver Assistant System.
- Taken measurements with ultra-sonic sensors in rear bumper on different driving and parking grounds and collected sensor data.
- Analysed measurement data within Matlab and comparing the influence on detection threshold with respect to individual signal feature.
- Optimized and validated the adaptive threshold parameters of CA-CFAR algorithm.
- Implemented VBA code for integrating Excel data into current Matlab GUI analyse-tools, making analyse automated.

Practical Lab, Statistical Signal Processing – Automotive Radar

Institute of Signal Processing and System Theory, University of Stuttgart

09/2013-01/2014

- Obtained basic concept of LFM CW-Radar for range and angle detection.
- Pre-processed raw radar signal and implemented adaptive threshold based on CA/OS-CFAR technique for range detection.
- Implemented simple Kalman filter for object tracking.

Scientific Assistant, Implementation in Matlab and VBA

Institute of High-Frequency Technology, University of Stuttgart

04/2013-07/2013

- Implemented analyse-tool with Matlab GUI for antenna radiation pattern
- Data processing with Excel VBA.

EDUCATION

M.S., Electrical Engineering and Information Technology
University of Stuttgart, Germany. 2012-Present

B.S., Electronic and Information Engineering
University of Electronic Science and Technology at Xi'an, China. 2008-2012

COMPUTER SKILLS

Programming: Skilled in Matlab (incl. GUI), Python, VBA
Fundamental C++, Javascript, HTML
Tools: Git, L^AT_EX, Vim, MS-Office

LANGUAGE SKILLS

Chinese Native
German Professional proficiency
English Professional proficiency

EXTRACURRICULAR ACTIVITIES

Rohde & Schwarz Case Study 2013 05/2013
Intercultural Mentoring Program, University of Stuttgart 2012-2013