

Zhengcheng Song

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EDUCATION

Master of Science in Electrical and Computer Engineering May 2021
University of Florida Gainesville, FL
GPA: 3.63/4.0

Bachelor of Engineering in Electronic Information Engineering June 2019
Xidian University Xi'an, China

Summer Program, Applied Information Theory August 2017
Cambridge University Cambridge, UK

RESEARCH

Lecture Project

University of Florida

- Implement a MLP and a CNN model on Fashion-MNIST dataset.
- Conduct experiment and discuss the selection of hyperparameters and different techniques, such as Dropout and Batch Normalization.
- Develop a Stacked Autoencoder on Fashion-MNIST dataset with maximum quadratic mutual information (QMI) or MSE loss.
- Compare the performance of four models and write an IEEE format report.

Bachelors Thesis

Xidian University

- Implement and tune a shallow CNN model to realize No-reference image quality assessment (NR-IQA).
- Devise a deeper network by using ranked images as training data. Generate a range of distorted images from original images and use their different rank in distortion to train a Siamese network. Extract one branch from the Siamese network, and finetune it on IQA train set.
- Compare these two models on different benchmark and write a thesis.

Brain-Computer Interface Summer Program

Institute of Brain Cognition and Brain Disease, Chinese Academy of Sciences

- Looking up correlative thesis, adopt a proximate method of generating visual stimuli with flexible frequency on 60Hz screen.
- Collect, clean and filter steady-state visual evoked potentials (SSVEP) signals in six different frequencies.
- Develop a Canonical Correlation Analysis method and a PCA with SVM method to classify SSVEP signals.
- Use SSVEP signal to control a single chip trolley's real time movement.

SKILLS

Competent in Python and MATLAB.

Some knowledge in C++, Verilog, and Docker.

Fluency in Mandarin.