

Ziming Qi

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EDUCATIONAL BACKGROUNDS

University of California, Santa Barbara

- B.S./M.S., Computer Engineering
- GPA: 3.47/4

B.S.: Expected Jun. 2020

M.S.: Expected Jun. 2021

POSITION APPLYING

- Research assistant in machine learning, image processing, data processing, biomedical imaging

MACHINE LEARNING TRAINING EXPERIENCES

Application of Machine Learning Tools (ECE157)

Sept. 2019 - Mar.2020

Advisor: Professor Li-C Wang (licwang@ece.ucsb.edu)

- *ML in Verilog*: used Decision Tree to extract rules from the cases of features in Verilog
- *Pokémon Classification*: applied KNN, LDA, Naïve Bayes, Decision Tree, and SVM for data classification based the data setting
- *Product Image Recognition*: modified the input data, processed images with ImageDataGenerate, and constructed a 3-layer 2D Neural Network for recognition
- *Glass Classification*: performed data visualization and obtained the density graphs; applied k-means and Affinity Propagation, and the mean shift method of clustering learning with Scikit-learn package for classification
- *Sufficient Data Selection*: applied monomial learning for key parameter extraction

Training Projects for Image and Video Processing (ECE181)

Jan.2019 - Mar.2019

Advisor: Professor Yuan-fang Wang (yfwang@cs.ucsb.edu)

- *Lip Tracking*: realized snake drawing around lips of provided videos, searched algorithms for lip tracking from GitHub, and performed the algorithms reimplementations
- *Panorama Picture Stitching*: performed image standardization and applied Computer Vision Toolbox package for the stitching
- *CNN/FNN based Category Classification*: used CNN-Relu-pooling, FNN, Resnet for image recognition on 60000 training samples and 10000 test samples

PROJECT EXPERIENCES

MRI Image Classification for HCP Data of 10T-scale

April. 2019 - Aug.2019

Advisor: Professor B.S. Manjunath (manj@ece.ucsb.edu)

- Reviewed the literature, manually classified sub brain-activates into ideal categories
- Link HCP data to BisQue website with BisQue API and sorted the files (10T scale) by Python scripts
- Added annotation on MRI image files with self-created Python API for future process
- Added DSI-Studio with C++ for BisQue website and successfully analyzed the brain white matter data
- Assisted in the MICCAI Workshop Paper

Microcontroller Based Real-Time Coagulopathy Measurement

Sep. 2019 - Jun. 2020

Advisor: Professor Yogananda (yoga@ucsb.edu)

- Working with two group members, designed and built the SAMD21 Cortex-M0+ based blocks, and realized the time controllability, sensor for blood reading, the power system, and android based remote control
- Assisted in the circuit construction, independently built C++ based PID control algorithm

Project: 16-bit Adder with LVS Technology, UCSB

Oct. 2018 - Dec. 201

- Built a 16-bit Adder with the LVS technology from Intel Pentium 4 processor to gain faster and less power consumption

- Designed CMOS transistors with Sue and Netlist software
- Successfully let the LVS 16-bit adder model gain 20% faster speed than normal 16-bit adder