

Jun Wang

PERSONAL INFORMATION

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EDUCATION

University of Pennsylvania - GPA: 3.95/4.0 Philadelphia, PA, USA
Master of Science in Engineering, Robotics (Computer Science Track) 08/2019-05/2021
Coursework: Machine Learning, Machine Perception, Data Mining, Linear Systems, Linear/Nonlinear and Integer Optimization, Dynamical Systems

Sun Yat-Sen University - GPA: 3.8/4.0 Guangdong, China
Bachelor of Engineering, Software Engineering 09/2015-06/2019
Advisor: Shuyuan Jin
Thesis: Combined Detection Approach to DNS Spoofing Attacks
Coursework: Data Structures and Algorithms, Computer Systems, Operating System, Database, Cloud Application, Computer Networks, Real-Time Systems, Embedded System

Sungkyunkwan University - GPA: 3.8/4.0 Suwon, Republic of Korea
Exchange Program, Computer Engineering 02/2018-07/2018
Coursework: Data Mining, Computer Vision

RESEARCH EXPERIENCE

Movie Recommendation System Project 03/2020-04/2020
University of Pennsylvania Philadelphia, PA, USA

- Designed strategies for movie recommendation formulated as multi-armed bandit problem using UCB1, Thompson, EXP3 and multiplicative weight algorithms
- Compared and discovered that all the algorithms used will converge to zero regret as data size increases while loss curves increase linearly

Machine Perception Project 01/2020-03/2020
University of Pennsylvania Philadelphia, PA, USA

- Reconstructed camera poses using AprilTags
- Used PnP with coplanar assumption to render a virtual bird on a prospective plane
- Used P3P followed by Procrustes to render a virtual bird on a prospective plane

Combined Detection Approach to DNS Spoofing Attacks 09/2018-05/2019
Sun Yat-Sen University Guangdong, China

- Proposed a comprehensive DNS spoofing detection approach which is able to detect spoofing attack based on different kinds of implementation such as traditional and Kaminsky spoofing attack.
- Improved the calculation mechanism of passive detection into a version which calculates the difference of total packet number between response and request packets specified to each domain

Loan Defaults Detection Project 05/2018-06/2018
Sungkyunkwan University Suwon, Republic of Korea

- Applied R to analyze a 300k data set of 9099 clients' initial information consisting of 31 variables to predict whether the new users qualify for loan
- Conducted data classification based on logistic regression, CART decision tree, KNN algorithm and hierarchical clustering as well as non-hierarchical clustering
- Concluded that data classification with KNN algorithm reaches optimal effect with AUC curve

- Synthesized and eliminated partial irrelevant variables through PCA to enhance accuracy

Multicycle CPU Design

09/2017-10/2017

Sun Yat-Sen University

Guangdong, China

- Used Vivado to implement multicycle CPU based on Verilog HDL to implement binary operation
- Completed the whole multicycle CPU implementation including acquiring instruction, parsing instruction, executing instruction, accessing memory and so on in one clock cycle

Development of Six-axis Unmanned Aerial Vehicle

07/2017-08/2017

Sun Yat-Sen University

Guangdong, China

- Developed an unmanned aerial vehicle on the basis of stm32 and MPU6050
- Employed the fourth-order Runge-Kutta to process IMU and to calculate accelerator data for accuracy improvement

Development of Intelligent Unmanned Car

07/2016-08/2016

Sun Yat-Sen University

Guangdong, China

- Established a simulation model of unmanned car with FPGA, infrared sensor and ultrasonic wave
- Sensed obstacle with ultrasonic sensor and compiled obstacle detection module using C++
- Used PID algorithm to control the number of cars so as to improve its control performance

Topology Performance Evaluation Based on Improved Dijkstra's Algorithm

10/2015-08/2016

Sun Yat-Sen University

Guangdong, China

- Modified Dijkstra's algorithm for the condition of multi-optimal routes in the network using C++
- Used R to analyze multiple stochastic networks including erdos-renyi model, barabasi model
- Proposed an evaluation system based on star schema to measure the time before reaching congestion

WORKING EXPERIENCE

Industrial and Commercial Bank of China, Guangzhou Branch

07/2018-08/2018

Software Development Engineer Intern

- Engaged in the Smart Library Project Based on Face Recognition, PC and PAD
- Applied the bank's internal system CTPX and CTP to implement a series of smart library's functions including recording, modifying, inquiring and deleting with Vue.JS, HTML/CS and SQL
- Assisted other colleagues in completing a face recognition system based on Vue.JS
- Served as team leader, distributed assignments to team members according to their strengths and independently finished user interface optimization as well as code testing

GuangDong Poya Information & Technology Co., LTD.

07/2017-08/2017

Algorithm Engineer Intern

- Used OpenCV to implement face detection with C++
- Trained a new face database with eigenface and OpenCV (haar classifier) and then successfully realized face recognition

SKILLS

- Skillful programming using **Python**, **C++**, **Matlab**, R plus experience in TensorFlow and PyTorch
- Mandarin, Cantonese, English & Korean

HONORS

2016, 2017 Third-class Prize Scholarship for Academic Excellence, Sun Yat-sen University
2017, 2018 Third Prize in the Mathematical Contest in Modeling