Szu Kai (Peter) Yang

bbkai2857@gmail.com
(765) 250-1102
https://yang2381.github.io

EDUCATION

Purdue University, West Lafayette, IN May 2020
Master of Science in Computer Science
Area: Machine Learning, Deep Learning

Purdue University, West Lafayette, IN May 2018
Bachelor of Science in Computer Information Technology

EXPERIENCE

Graduate Teaching Assistant West Lafayette, IN
TA Operating System - (C) Jan 2019 - May 2019

- Instructed lab sections for CS 35400 - Operating System which covers Computer system and operating system architectures, processes, inter-process communication, inter-process synchronization, mutual exclusion, deadlocks, memory hierarchy, virtual memory, CPU scheduling, file systems, I/O device management, security
- Worked on open source operating system XINU, an compact kernel for embedded systems
- Developed Bash script to test and grade student's XINU

Quan Industrial Consulting New Taipei, Taiwan
Intern, Software Development - (C, Python) Jun 2018 - Aug 2018

- Worked on Internet of Things (IOT) project sponsored by National Industrial Development Bureau of Taiwan, R.O.C
- Involved in product development cycle including capturing user needs, designing, coding, testing and integrating and writing documentation, in a team environment
- Incorporated application layer protocol, MQTT, onto device with limited internet connectivity in C
- Increased the performance by 93 times faster
- Presented in National Innovation Technology Expo 2018

SKILLS

- **Programming Language**: Proficient: Python, C, Java Familiar: C++, BASH, Swift, C# **Database:** MySQL, Oracle SQL

PROJECTS

Simpson Image Recognition and Generation Oct 2018 - Dec 2018
Generative Adversarial Networks [GAN] - (Python, Pytorch)

- Built and trained Deep Convolutional Generative Adversarial Network and Boundary Equilibrium Generative Adversarial Network with Pytorch in Python
- Generated entirely new Simpsons character from existing Simpsons character
- Achieved high image quality Simpson character that looks alike Simpsons characters

Convolution Neural Network CIFAR-100 Sep 2018 - Oct 2018
Image Detection and Classification - (Python, Pytorch)

- Implemented a Deep Learning LeNet-5 Network Architecture that train and validate on CIFAR-100 dataset with Pytorch in Python
- Classified objects in images out of 100 different classes
- Engineered OpenCV with CNN to classify objects in real time through WebCam

CERIAS Benedor TSE Bank Mobile Payment Jul 2017 - Nov 2017
P2P Financial Transaction - (Python, Swift)

- Developed behavior-based and regression testing script in Python for 12 RESTful APIs
- Build client-side code on iOS (in Swift) to interact with existing server using the 12 RESTful APIs
- Succeeded with an extend of sponsorship from CERIAS partner
- Demo: https://goo.gl/BPpsDj

Web Crawler and Search Engine Jun 2017 - Jul 2017
Crawl information from a Root URL - (C++)

- Developed an web crawler (in C++) that retrieves more than 100 URLs and descriptions of the site
- Constructed HashTable, AVL, Heap and Resizable Array data structure for information crawled from web

UAV Communication Security Jan 2016 - May 2016
Safeguarding Data Transmission - (C, Python)

- Researched on communication security between UAVs (Unmanned Aerial Vehicle) and ground station
- Investigated methods to securely transmit, receive and delete information in Python
- Proposed 2 channels security communication for UAV data transmitting
- K. Yoon, D. Park, Y. Yim, K, Kim, S. K. Yang, M. Robinson. (2017). Security Authentication System Using Encrypted Channel on UAV Network. 2017 First IEEE International Conference on Robotic Computing (IRC), Taichung, Taiwan (pp. 393-398)