Pin-Ho Wang

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SUMMARY

Computer System Engineering student with experience in modeling problems, programming; knowledge of MVC design pattern; enthusiastic in coding and developing customer orientated products; have interdisciplinary skills in developing simulated models for solving physics problems

EDUCATION

Northeastern University, Boston, MA
Master of Science in Computer System Engineering Expected May 2020
Relevant Courses: Concepts of Object-Oriented Design, Program Structure & Algorithms

National Taiwan University, Taipei, Taiwan
Master of Science in Photonics-Optoelectronics Feb 2017
Relevant Courses: Numerical Analysis and Programming, Digital Signal Processing, Introduction to Digital Speech Processing, Data Structure and Programming, Algorithms, Operating Systems

Yuan Ze University, Taoyuan, Taiwan
Bachelor of Science in Electro-Optical Engineering June 2014
Relevant Courses: Intro. to Computer Science, Programming Language

TECHNICAL SKILLS

Programming Language:	Java, Python, C++/C, Matlab
Tools and Platforms:	Git, JavaFX, OpenCV, NumPy, SciPy
Operating Systems:	Linux, Unix, Windows

PROJECTS

Day Care System Project Sep. 2018 - Oct.2018
- Contributed the UI part and controllers of Day Care System based on MVC architectural pattern and implement with SOLID principles for the architecture
- Developed the modules using JAVA for controllers and JavaFX for user interface

Physics Models Testing and Development (Master Research) Sep. 2014 - Feb. 2017
- Combined Finite Element Method model and Imaginary Distance Beam Propagation method to simulate various advanced structures in photonics integrated circuit
- Using C++ and MATLAB for designing a mode-area sub-functional API for main task
- Published a paper in IEEE International Conference on Computational Electromagnetics and also won the student poster reward in OPTIC international conference

Nachos Operating System Sep. 2016 - Feb. 2017
- Designed thread management and memory management in Nachos operating system
- Implement Deadlock characterization and kinds of scheduling algorithms by C++
- Presented the results in the class successfully accomplished the multiple CPU scheduling methods and got A in final grade

Speech Processing Project Mar. 2016 - Jun. 2016
- Design a Hidden Markov Model (HMM) to classify the Chinese text and speech/audio signal
- Using Python to parse the text and C++ to build the speech models, such as Language and Acoustic model; implement **Viterbi algorithm** and **Vector Quantization (VQ)** for HMM
- Demonstration the result in the final class and got top ten groups in the final competition

Images Processing Project Mar. 2015 - Jun. 2015
- Built up the application which can sharpen and blurry images by using Fourier Transform algorithm; apply the technique to image edge detection
- Using **Python** to process images in frequency domain by Fourier Transform Algorithm
- Improvement FT into **Fast Fourier Transform Algorithm** and demonstration in the final presentation

Speech Enhancement Project Mar. 2015 - Jun. 2015
- Implement the **Wiener filter** for the noise reducing part and combined with mainly function
- Using **Matlab** for implement and testing; transfer Matlab code into Python for integration
- Demonstrated the experiment results in the final class and got A in final grade