Yin Fung Khong

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Emerging Computer Engineer with hands-on experience in hardware and software development, proficient in a range of modern technologies and Object-Oriented Programming: Matlab, Python, Java, Vivado SDK and Linux. Adept at image processing with a research publication in IEEE academic conference. Self-motivated with analytical problem-solving skills, able to analyze data to resolve issues in a fast-paced environment. Proactive and dependable while achieving high problem solving and technical performance in a team with minimal supervision.

EDUCATION

Master of Science in Computer Engineering, 2019, GPA 3.94/4.0

Bachelor of Science in Computer Engineering, 2018, GPA 3.94/4.0

California State University, Northridge (CSUN)

- Summa Cum Laude (2018), Distinction Award, Outstanding Graduate Student (2019), Dean's List
- Coursework: Image Processing, Computer Network Software, Advance Data Structure, Computer System Security, Advance Web Engineering, Diagnosis and Reliable Design of Digital Systems, Error Detection and Correction Systems Design, Design of Digital Computers, FPGA/ASIC Design and Optimization using VHDL
- Tau Beta Pi Engineering Honor Society (TBP), Institute of Electrical and Electronics Engineers (IEEE)

SKILLS

Programming: C, C#, Java, Matlab, Python, VHDL, Verilog, System Verilog, ARM Assembly Language, PHP

Embedded System: ARM7 LPC2148 Microcontroller, Xilinx Zynq-7000 SoC Zedboard

Operating Systems/Development Tools: Microsoft Windows, Linux, Mac, Ubuntu, Visual Studio, Eclipse

Multilingual: fluent in English, Mandarin, Bahasa Malaysia and conversational in Cantonese and Hokkien

WORK EXPERIENCE

Graduate Assistant | ***CSUN Dept of Electrical & Computer Engineering*** ***Sept 2018 – May 2019***

- Assisted approximately 200 students, offered constructive feedback based on students' performance.
- Led weekly lab and provided feedback to improve programming and debugging technique for code efficiency.

Graduate Intern | ***Intel Corporation (iCDG)*** ***June 2018 - Aug 2018***

- Developed and debugged C# software application to expedite and automate test data analysis, incorporating JMP and various package managers to populate Microsoft Excel report with calculations and graphs included.
- Implemented Machine Learning using Python for pattern detection to predict the data distribution type.

PROJECTS

Efficient Implementation of Nucleus Detection and Segmentation Using Correlated Dual Color Space ***Apr 2019***

- Proposed an algorithm for nucleus segmentation in microscopic blood images using digital image processing techniques, to improve the accuracy and accelerate blood diagnosis.
- Developed a highly versatile image processing technique to segment the nuclei from a broad spectrum of blood images while retaining cell features and integrity in the processed image up to 98.99% accuracy using Matlab.

Automated Application Data Validator ***Apr 2019***

- Assessed the process and made recommendations to implement automated validation tools to supervisors.
- Utilized C# in Visual Studio IDE to develop a software tool that automates data validation, flags invalid or incomplete profile with high accuracy, and reduced human involvement and processing time up to 95%.

Distance Vector Routing in a Remote Messenger App using Java ***Apr 2019***

- Created and tested a simplified messenger in Visual Studio IDE utilizing Distance Vector Routing Protocol on top of TCP connection to determine the best route between nodes in the network.
- Predefined network topology into the program upon startup, and server commands may be called to manipulate the topology, including updating the link cost between two nodes and disabling certain nodes.

A Chat Application for Remote Message Exchange in C Language ***Mar 2019***

- Developed a two-in-one server-client chat application utilizing TCP/IP protocols, fully scripted in C language using Eclipse IDE and UNIX shell that is able to handle multiple socket connections at any runtime.
- Extended program functionality with user commands, and handled possible system and user errors.

Blood Cells Detection using Circular Hough Transform in MATLAB ***Dec 2018***

- White Blood Cells detection and calculation on color blood test images in MATLAB environment.
- Applied various morphological operations to process and filter image noise for further handling.

INVOLVEMENTS / ACHIEVEMENTS

President, *Leaders in Engineering and Computer Science Student Council* ***Nov 2017 – May 2019***

- Developed a unified and comprehensive representation of students in the college by coordinating Engineering Week and professional workshops inclusive to all students, to promote engineering awareness.
- Served in Student Advisory Board, supported and assisted the college in ABET accreditation.

President, *Tau Beta Pi Engineering Honor Society* ***May 2017 – May 2019***

- Re-chartered and grew the chapter within the college, initiated over 140 members into the organization, and expanded the leadership team to 19 board officers to effectively conduct chapter operations and expansion.
- Mastered teamwork and communication skills, served as National Chair of Financial Affair Committee twice, and awarded "Effective Use of Technology Award" and "Best Leadership Award".

Peer Mentor, *CSUN Mentorship Program* ***Jan 2017 – May 2019***

- Impacted approximately 25 assigned mentees positively by serving as a social and academic role model by setting SMART goals and offering support through referral of resources available on campus.
- Fostered a supportive environment through share of experience and constructive feedback on performance.

Student Coordinator, *CSUN-CECS Mentorship Program* ***Jan 2019 – May 2019***

- Identified the common concerns and challenges faced by the students within the college, and structured the program accordingly to improve students learning outcome and college experience.
- Liaised with the Dean's Office to ensure complete alignment of program objectives and consistent delivery of positive outcomes while managing a team of 10 student mentors.

President's Volunteer Service Award (PVSA), *Unified We Serve* ***2016, 2017, 2018, 2019***

- Awarded the Gold Award for four consecutive years by accumulating over 100 hours of verified volunteering services on and off campus each academic year, to promote community engagements and awareness.