Sam Hachem
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A Graduate Student with Specializations in Software Engineering, Embedded Systems and Architecture

EDUCATION

UNIVERSITY OF ILLINOIS AT URBANA – CHAMPAIGN, GRAINGER COLLEGE OF ENGINEERING   Urbana – Champaign, IL
GPA: 3.7/4.0
- Bachelor of Science in Computer Science, BS   Dec 2021
- Master's In Computer Science, MCS   Dec 2022

EXPERIENCES

TERADYNE   Deer Park, IL
Software/Systems Engineering Intern   May 2022 – Aug 2022
- Low-level system design for semiconductor testing software with instruments such as UPD64, APU32, and SPU8112
- Completely redesigned and enhanced functionalities for sequencing verifier as well as the graphical user interface
- Investigated different development streams to analyze code performance and benchmark metrics

S&C ELECTRIC COMPANY   Chicago, IL
Software Engineering Intern   Jun 2021 – Aug 2021
- Integrated the technologies of Roambee into S&C systems for asset management and tracking
- Developed new technologies and techniques for the Fabrication and Production lines
- Developed an app for COIVD-19 check-in process

RESEACHES

Impact of Dynamic Voltage and Frequency Scaling (DVFS) on SoCs   Urbana – Champaign, IL
University of Illinois at Urbana-Champaign   Mar 2022 – May 2022
My team and I explored the impact of system unaware DVFS techniques on a mobile Samsung Exynos 5422 SoC under three benchmark suites: Chai, Rodinia, and Antutu. We then analyzed performance trends across the suites to identify a set of consistent operating points that optimally balance power and performance across the system.

PROJECTS

IoT PICAR, SMART CAR   Urbana – Champaign, IL
Embedded Systems Engineer   Aug 2021 – Dec 2021
- Integrated different sensors and systems such as 4WD Hat and ultrasonic sensor into a raspberry Pi through GPIO
- Developed obstacle avoidance and detection code for smart navigation and self-driving using Tensorflow libraries
- Developed a Web App using Node.js for wireless navigation and communication with the Picar

CONDOR FOR THE COMMON MAN INVESTMENT APP   Urbana – Champaign, IL
Software Developer   Jan 2021 – May 2021
- Primarily developed a python library to leverage the TraderAPI resources for stock and option data gathering
- Developed a robust backend system using Django to serve specific, and at large data, about stock and option requests
- Built a sophisticated mechanism to make option calls based on the condor model

SKILLS

- Technical Languages: C, C++, Verilog, C#, Python, Java, swift, CUDA, MPI, Django, React Native and NodeJS
- Embedded Systems: Arduino, ODROID with Samsung Exynos5422 SoC, and Pynq Board with Xilinx Zynq-7000 SoC
- Software: Xilinx Vivado, Google Firebase, CLion, IntelliJ IDEA, and Xcode
- Database Systems: MySQL, Neo4j, MongoDB
- Language: English, Arabic and French (Fully trilingual)