Georges Alsankary

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Education

University of Notre Dame, Notre Dame, IN **May 2020**
Bachelor of Science in Computer Engineering GPA: 3.45
Relevant Coursework: Embedded Systems, VLSI Circuit Design, Signals and Systems, Electronics, Compilers

Research

Panasonic Automotive NAND Research Preternship, Notre Dame, IN Fall 2019

- Use SPICE to generate NAND cell model and simulate usage and memory reads and writes of NAND cell
- Read scientific literature related to alpha-particle and neutron corruption of NAND cells
- Research software and hardware techniques that attempt to mitigate data corruption

Kaneb Center for Teaching and Learning, Notre Dame, IN Fall 2016-2018

- Designed, built and implemented over 50 surveys using Qualtrics and JavaScript
- Tracked, analyzed and visualized results with Excel and Python for over 10 faculty members and university staff
- Administered surveys to over 2000 university students

Projects

Smart Thermostat, EE 30321 – Embedded Systems Spring 2020

- Build a thermostat device using a Microchip controller, an LCD Screen, an LED light, a temperature sensor, and buttons
- Implement thermostat device in C, with I2C and SPI communication protocols.
- Individual project that required an understanding of microprocessor architecture, timers, and interrupts

Bminor Compiler, CSE 40243 - Compilers Fall 2019

- Design, implement and test a full custom-language compiler
- Uses Flex for scanning, Bison for parsing, C for AST building and x86 Assembly for code generation
- Semester-long, individual project

Piano Teacher, CSE 40522 - Computer Engineering Capstone Design Fall 2019

- Design a helper device that uses LEDs, a Raspberry Pi and an Arduino to assist students in learning how to play the piano
- Communicate with browser using Flask server setup on Pi, Flask code in Python and HTML and C code for the Arduino
- Device analyzes sound signals to match and validate piano note press
- Built alongside three teammates, uses Git repository for version control and code sharing

Internships

Solas OLED, Dublin, Ireland Summer 2019
Electrical and Computer Engineering Intern

- Conducted literature review of dozens of patents, conference and journal papers to develop an understanding of technology utilization in the market
- Contributed to the development of two new patent applications in the area of OLED technology by developing simulation software in Python and reading related literature
- Contributed to the filing of open patent applications/continuations in existing patent portfolios

Computer Science and Engineering Makerspace, Notre Dame, IN Fall 2019
Student Manager

- Operate and maintain Raspberry Pis, Arduinos, Rigol measurement devices and 3D Printers
- Teach and instruct students on usage of said devices through live and pre-recorded tutorial content
- Assist students with software and hardware debugging, electrical wiring of components, and projects
- Organize biweekly events like openings and office hours, and track inventory every week

Center for Applied Research in the Apostolate at Georgetown University, Washington, DC Summer 2018
Summer Researcher

- Developed Python GUI tool for data retrieval from digitized databases dating back to early 1900's
- Documented related software and instructed researchers on usage of developed tool
- Analyzed and visualized data using SPSS and Python, in addition to having written detailed data analysis reports
- Built and updated website using HTML and CSS, assisted with survey design using JavaScript and Qualtrics

Skills

Technical: C, C++, Python, Java, Verilog, MySQL, HTML, CSS, PHP, MATLAB, Git, Qualtrics, SPICE, x86, ARM and PIC Assembly
Language: Arabic (Native), English (Fluent), French (Fluent)
Interests: Notre Dame Liturgical Choir, Stanford Hall Cross Country Club