Omar Abouhussein

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EDUCATION

PURDUE UNIVERSITY
WEST LAFAYETTE, IN
Bachelor of Science in Computer Engineering (Certificate in Entrepreneurship and Innovation)
Graduating May 2020
GPA: 3.58/4.00

TEACHING ASSISTANT

- **ECE368**: Data Structures (Fall '19-Present)
- **ECE364**: Software Engineering Tools Lab (Fall '19-Present)
- **ENGR131**: Transforming Ideas into Innovation (Fall '17)

RELEVANT COURSES

- **ECE595**: Applied Algorithms
- **ECE404**: Intro to Computer Security
- **ECE463**: Intro to Computer Networks
- **ECE368**: DS and Algorithms
- **ECE364**: Software Engineering Tools Lab (Python and Bash)
- **ECE20875**: Python for Data Science
- **ECE30862**: Object-Oriented Programming
- **ECE369**: Discrete Mathematics
- **ECE264**: Advanced C Prog.
- **ECE362**: Microprocessor Systems and Interfacing
- **ECE270**: Digital System Design

SKILLS

Programming Languages:
- C/C++/C--
- Python
- Java
- System Verilog
- MATLAB
- SQL
- HTML
- Bash
- Git
- Android Studio

Frameworks:
- TensorFlow
- Jenkins
- AutoCAD
- Google Cloud Vision
- Clarifai API

Languages:
- Bilingual: English/Arabic
- Intermediate: Spanish/French

WORK EXPERIENCE

QUALCOMM | SOFTWARE ENGINEERING INTERN
Summer 2019 | San Diego, California
- As a part of the LTE Layer1 Uplink division, worked to enhance off-target testing and logging.
- Also responsible for enhancing the Crash triage and related plugins.
- Developed an intelligent emailing assistant to automatically update the prism, triage issues, and execute commands mentioned in the email.

WEARABLE OS SECURITY RESEARCH | UNDERGRADUATE RESEARCH STUDENT
August 2019 – Present | West Lafayette, Indiana
- Evaluated the reliability of Wearable Android OS devices, such as smartwatches, on health/fitness applications by injecting errors on these devices to see the correlation.
- Ran experiments to launch fuzz testing based on IPC focusing on Intents that have deprecated constants.
- Generated interactive graphs that visualize and analyze patterns in time series data. Used statistical calculations of deseasonalization, causality, entropy, etc. to draw patterns on the data.

INDOOR POSITION SYSTEM (IPS) RESEARCH | UNDERGRADUATE RESEARCH STUDENT
Jan 2018 – August 2018 | West Lafayette, Indiana
- Developed a full system necessary to achieve high-precision (approximately 10-cm) positioning in an indoor environment.
- Took charge of the Application/Software Development of this system.

DATA ANALYTICS FOR SMART CITIES RESEARCH | UNDERGRADUATE RESEARCH STUDENT
Summer 2018 | West Lafayette, Indiana
- Integrated IntelliSense Depth sensors on cars to detect potholes on the road
- Used Machine Learning techniques to detect the potholes and cracks on defected roads.

EXTRACURRICULAR EXPERIENCE

SOFTWARE SATURDAYS
Feb 2019 – May 2019 | West Lafayette, Indiana
- Learned the basics of Android App Development in Android Studio using Java.
- Utilized OOP to enhance game development concepts.

SPARK CHALLENGE
Dec 7 2018 | West Lafayette, Indiana
- Designed a safe that doubled as a cookie jar which locked/unlocked with a solenoid mechanism, using embedded C language to code the STM32F0 microcontroller.
- As a group of four, we built a locking system that is triggered only by correctly answering a set of mathematical expressions, with each answer being a digit to the passcode responsible for unlocking the solenoid.
- Developed an alarm system for the safe that is triggered in the case of supplying a wrong input, inputting multiple answers consecutively, or if the user fails to input an answer within an allocated time frame.
- Awarded 3rd place of 70 teams by the *school of ECE, ECE Student Society, and General Motors* for the outstanding achievement in designing and prototyping a microcontroller-based project.

MADHACKS HACKATHON
Nov 2018 | Madison, Wisconsin

COMMUNITY SERVICE

HABITAT FOR HUMANITY | INTERNATIONAL MEMBER
Feb 2015 | Phnom Penh, Cambodia
- Gained international experience as a team member for an international, non-profitable organization.
- Diligently worked as a team to establish a foundation to two houses to the less fortunate.

HONORS AND AWARDS

DEAN'S LIST (1)
Spring 2019 | Purdue University

SEMESTER HONORS (4)
Fall 2017 - Spring 2018 - Fall 2018 -Spring 2019 | Purdue University

QualStar Award
Summer 2019 | Qualcomm Technologies, Inc. | San Diego, CA
Awarded for outstanding contribution to the team's success