

Jonathan Bernal

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EDUCATION

Florida International University
B.S in Computer Engineering, Honors College

Miami, FL, USA
Graduated: May 1, 2017

SKILLS

Proficient: C, C++, Java

Familiar: C#, JavaScript

Libraries/Platforms: Unity, WxWidgets, Keil uIDE, Microsoft Visual Studio/Code, Linux, ARM

Markup/Templating: HTML, CSS, LaTeX

RELEVANT COURSEWORK

C/C++ for Engineers, Data Structures, Programming III (C), Programming II (Java), Operating Systems, Embedded GUI

EXPERIENCE

Open Human Interaction Design Lab (OpenHID)

Undergraduate Research Assistant

Miami, FL
May 2016 – Dec 2017

- Designed a gesture elicitation experiment for collecting user gestures for the Microsoft HoloLens mixed reality headset
- Designed a wearable device capable of measuring user bio-signals, such as stress, hand position, and linear and angular acceleration in space
- Researched Literature works in areas related to Human-Computer interaction
- Co-authored five publications across various IEEE and ACM journals

PROJECTS

Gesture Elicitation Experiment – Unity, C#

- Consists of a holographic spatial environment rendered across the user's room
- Users need to complete a series of tasks while moving around the room they are in

Multi-sensor wrist-worn wearable – C++, ARM

- A wearable capable of reading a user's stress levels, position and acceleration to drive mobile and desktop apps

Fred's Farm – C++, WxWidgets

- A game for the BeagleBone Black where animals—classified as prey and predators—compete to survive

FPGA Greenhouse Controller – C++, Xilinx ISE/EDK/SDK

- A system that monitors temperature across rooms to guarantee optimal plant growth

ACTIVITIES

Volunteer Research Assistant – OpenHID Lab

Aug 2015- May 2016

- Contributed to the prototyping and design of a multimodal painting application
- Helped find literature works appertaining to Human-Computer Interaction

Volunteer Math Tutor – Miami Dade College Wolfson Campus

May 2013- May 2014

- Provided one-to-one tutoring to students in different math subjects
- Managed to help students attain grades in the 85-100 percentile range