

Nic Capdevila

University of Iowa College of Engineering
Graduated: December 2014

UNIVERSITY OF IOWA ADDRESS:

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EDUCATION: The University of Iowa College of Engineering, Iowa City, Iowa

M.S., Computer Engineering | Dec. 2014

- Master's Thesis: "Human Centric Body-Armor System Optimization"

B.S., Electrical and Computer Engineering | May 2011

- Minors: **Computer Science** and **Mathematics**
- Focus: **Software Development**

WORK EXPERIENCE:

Graduate Researcher and Developer at Virtual Soldier Research | Aug. 2011 – Jan. 2015

- Led development of Armor Optimization given user supplied constraints on a human model for the U.S. Military
- Various help to team members and bug fixing

Undergraduate Researcher and Developer at Virtual Soldier Research | Sept. 2010 – Aug. 2011

- Led a project to successfully create a full head tracking in a 3D environment using the Nintendo Wiimote
- Worked on project along with Rockwell Collins to improve the circuit design and testing process in a virtual environment

Guitar Teacher at Musician's Pro Shop | Sept. 2007 – July 2013

NOTABLE PROJECTS PROJECTS:

Senior Design Project | Jan. 2011

- Used ATmega328P (C++) and Bluetooth module to relay controller data to Android mobile device application (Java)

Santos™ | 2010 - 2015

- Continually work on software that was approximately 750,000 lines and being worked on by approximately 15 people.
- Work included implementation of new features as well as bug fixing (C#, C++)

TECHNICAL EXPERTISE:

Languages: Visual Basic, C, C++, Java, Assembly, VHDL, HTML, CSS,

Javascript, C#, Virtools

Engineer/Standard Software: MS Visual Studio, Eclipse IDE, Arduino IDE, Virtools, Matlab, Mathematica, MS Office (Word, Excel, Powerpoint), Android Studio

Hardware: Atmel AVR 8-bit and 32-bit Microcontrollers, Peripheral devices (SPI, I2C, UART, USB, Bluetooth, Wi-fi, Logic Shifting, displays, etc), Instrumentation (Oscilloscope, Volt-Ohm meter), Motion tracking (Kinect, Wiimote)

O/S: Windows, Mac OS X, Linux, Android

Teamwork: Digital Design Projects, Team Coding, Circuit labs, Embedded Systems Design and Lab, Senior Design, Group Work at Virtual Soldier Research

ENTREPRENEURIAL PROJECTS:

Volding Business Plan for Mazira.com

Rose Francis Elevator Pitch: Consecutive 2nd and 1st place

PUBLICATIONS:

Marler, T., Capdevila, N., Kersten, J., Taylor, A., Wanger, S., Xie, W., and MacKiewicz, J. (2014), "Task-Based Survivability Analysis: an Overview of Capabilities," 3rd International Digital Human Modeling Symposium, May, Tokyo, Japan.

Capdevila, N., and Marler, T. (2014), "Human-Centric Topology Optimization for Body Armor," Personal Armor Systems Symposium, September, London, England, The International Personal Armour Committee (IPAC).

Capdevila, N., Marler, T., Mathai, A., Hofer, R. (2013), "Digital Human Modeling for Optimal Body Armor Design," 2nd International Digital Human Modeling Symposium, July, Ann Arbor, MI.