ANDRÉS
ZAMBRANO BUSTOS

EMBEDDED SOFTWARE ENGINEER

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WORK EXPERIENCE

EMBEDDED SOFTWARE ENGINEER - GE Aviation
📍 Queretaro, Mexico

Jun 2019 - Present

Software development (design and code) and verification to DO-178C standards of the OS-interfacing component and the data retrieval component for GE Aviation's next-gen Flight Management System. Worked with Ada and C.
Early Career Engineer 2020 Award Winner.

EDISON ENGINEERING DEVELOPMENT PROGRAM - GE Aviation
📍 Queretaro, Mexico

Jan 2017 - Jun 2019

Technical leadership development program focused on software and systems engineering. Advanced courses on software development, software lifecycle, embedded systems, avionics, testing, safety, MBD, RTOS, etc. Four work rotations on Flight Management System verification and development for the UI, IO, Redundancy and Flight Planning system components. Worked with Ada, Python, C#, VB and Java.

EDUCATION

INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY
DIGITAL SYSTEMS AND ROBOTICS ENGINEERING B.S.
2011 / 2016

DANMARKS TEKNISKE UNIVERSITET
INTERNATIONAL EXCHANGE
FALL 2015

ÉCOLE CENTRALE D'ELECTRONIQUE PARIS
INTERNATIONAL EXCHANGE
SUMMER 2014

MAJOR PROJECTS

Spring 2015

BIOSENSOR DATA ACQUISITION
Project developed for LICORE. Signal conditioning and development of VHDL drivers for Zynq FPGA for serial monitoring. Best electronics project of 2015.

AES ENCRYPTOR
Implemented AES encryption and decryption on an Altera FPGA board using Verilog and on an AVR microcontroller in C language.

Spring 2014

GAME MATRIX
Created a gaming system using microcontrollers and a RGB LED Matrix. Cross-communication using serial protocol. Displayed time with real time clock.

Spring 2013

LED DISPLAY
Developed an LED Matrix controlled by an FPGA which displayed characters typed on a keyboard. Used PS/2 protocol. VHDL. Team of three.

Fall 2015

GIGABIT ETHERNET SWITCH
Fully implemented a switch in a Stratix IV FPGA using VHDL according to the IEEE 802.3 standard as a member of a team of four.

MEET4LUNCH
iPhone application developed in Xcode using Swift and Parse API for cloud storage.

Fall 2014

PET FEEDER
Web enabled system to feed small pets. Programing in C, JavaScript, HTML5 and CSS. Interfaced through webpage with microcontroller via a REST web service.

AUTOMATIC GREENHOUSE
Developed a automatic heating control system for a greenhouse model. Interfaced the system to a computer through Bluetooth using a serial protocol to log data.

Fall 2013

ULTRASONIC VISION FOR THE BLIND
Built an electronic system with proximity alerts using ultrasonic sensors. Described for FPGA in VHDL as part of a team of four. Responsible for logic design.
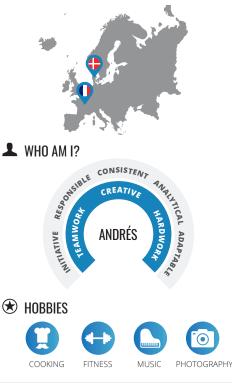
INTERESTS

Coding	App Development
Software Architecture	Computer Interfaces
Software Design	SoC Design
Embedded Systems	Internet of Things
FPGA Programming	Machine Learning
Avionics	Cryptography
Microcontrollers	Web development
Systems Engineering	Verification

PROGRAMMING LANGUAGES

(In order of experience)

Ada	HTML	Perl
C/C++	Javascript	Powershell
VHDL	Bash	Assembly
C#	PHP	Verilog
Python	SQL	LabVIEW
Visual Basic	MATLAB	LaTeX
Java	Simulink	
Swift	Unix shell	

INTERNATIONAL EXPERIENCE

WHO AM I?

RESPONSIBLE · CONSISTENT · ANALYTICAL · CREATIVE · TEAMWORK · HARDWORK · INITIATIVE · ADAPTABLE
ANDRÉS

HOBBIES

COOKING   FITNESS   MUSIC   PHOTOGRAPHY

MORE INFO
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