SERGIO MORALES

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QUALIFICATION SUMMARY

- C/C++, 5 years (control systems)
- Matlab & Simulink (modeling & Stateflow)
- GNU/Linux Shell (general scripting)
- HTML/CSS & JavaScript
- Java (Android development)
- PCB Prototyping (breadboard & circuits)
- 3 years of experience working from home
- Fluent in English & Spanish

PROFESSIONAL EXPERIENCE

General Motors, Michigan, USA **[**Working 100% remotely from San Diego, CA]
Software Engineer / Scrum Team Member – Thermofluid & Chemical Controls January 2019 – Present

- Design & develop embedded control algorithms in C/C++ (or Matlab/Simulink based) for engine control features such as closed loop fueling, O2 sensors, evaporative diagnostics, and fuel system diagnostics.
- Test driven development methodologies with CppUTest for unit testing (as well as in-house testing tools)
- Utilize SAFe framework working in a scrum team.
- Utilize Git ecosystem (Eclipse, Gerrit, Jenkins, IBM RTC, as well as in-house tools)

Algorithm & Software Engineer – Propulsion Systems Embedded Controls July 2015 – January 2019

- Design & develop embedded control algorithms in C/C++ (handcoded or Matlab/Simulink based) for engine control features such as vehicle theft deterrent, powertrain cooling fans, and fuel level sensing.
- Utilize IBM RTC as well as IBM Rational Synergy for configuration & change management
- Provide in-vehicle or HIL bench support through ECU patching and INCA instrumentation

University of California, Riverside Extension Center (UNEX)
IT Student Worker – Department of Information Technology June 2013 – June 2015
Implemented automation of software through scripting and aided in improving workflow of staff by through helpdesk tickets. Aided in setting up and maintaining full hardware and networking for all classrooms/labs.

PROJECTS

Integrated Appliance System (IAS) September 2013 – June 2015
Awarded second place in SMI's Design & Manufacturing Contest, and winner of UCR's Sustainability Fellowship Award. Implemented ATmega microcontrollers and a custom PCB to utilize feedback control to actuate the appliances in a way that allows the end user of the IAS to monitor the temperature, humidity, and energy usage.

Nintendo Entertainment System FPGA Emulator Summer Study Abroad 2014 – Lausanne, Switzerland
Implemented an NMOS 6502 microprocessor in C; using Altera's Nios II processor IP core. Worked in a team of five and to establish a stable version of the project that rendered images using Verilog.

EDUCATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE Graduated June 2015
2011 – 2015, Bachelor of Science Degree, **Computer Engineering**. GPA: 3.2/40 Major: GPA 3.4/4.0

AFFILIATIONS

Society of Hispanic Professional Engineers (SHPE) September 2012 – Present
Webmaster & Internal Affairs (2013-2015), General Member of Professional Chapter (Present)
Took charge of establishing and maintaining connections with any organizations and alumni within UCR. Also lead a team of members in providing a website for the organization, hosted on the school's servers.

Institute of Electrical & Electronics Engineers (IEEE) – General Member
Association for Computing Machinery (ACM) – General Member

AWARDS & CERTIFICATIONS

- SAFe 5 Practioner – 2020
- Design for Six Sigma Black Belt – 2017
- UCR Summer Study Abroad Scholarship – 2014
- Affiliates of UCR Scholarship 2014 Recipient
- Xerox Scholarship – 2013
- Startup Engineering Cert (Coursera) – 2013