

James Patrick Bergin

Firmware Engineer

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Summary

Firmware/Embedded Software Engineer with a bachelor's degree in Electrical Engineering with a varied background throughout industries including: consumer electronics, oil field services, oil field equipment manufacturing, and purchasing consulting.

Experience

Firmware Engineer

Artiphon

April 2015 - Present

Music tech consumer electronics start-up company that is changing the future of music creation

- Engineer responsible for developing embedded software for the flagship product, a digital musical instrument
- Developed sets of tools to be used with the INSTRUMENT1, an automated compile/build and publishing script and a set of factory quality assurance tests
- Experience interfacing with: codecs, amplifiers, EEPROMs, accelerometers, gyroscopes
- Experience with Scrum/Agile development and Git versioning
- Compliance with EMC / EMI / CE / MFi

Measurement While Drilling Field Engineer

Halliburton

October 2015 - April 2015

- Performed on site Measurement While Drilling operations for directional wells in the Northeastern USA: set up and tear down of field equipment, use of tools to determine the position and direction of the well bore in real time, and collection of data on the properties of the formation for ongoing formation evaluation

Engineering Intern

FMC Technologies

August 2011 - August 2013

- Conducted research regarding the technical and financial viability of a new subsea oil production and processing sensing product
- Modeled parts and assemblies, and drew schematics in Solidworks and AutoCAD to be used in manufacturing
- Conducted quality control inspections and warehouse admissions of critical supplies ranging from raw materials to fully-assembled components, succeeding in eliminating a longstanding backlog in both processes
- Developed training materials, including a 3D computer animation for the assembly and operation of certain subsea equipment

- Translated technical documents, including subsea equipment technical assembly instructions, material specifications, and testing procedures
 - Engaged in multiple training programs including engineering processes, use of various software, and equipment information
 - Participated in technical visits to various manufacturing, warehouse, and repair facilities
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Education

Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio)

Bachelor's degree

Electrical and Electronics Engineering with emphasis in Electronics and Computer Systems

Recent graduate of highly regarded Brazilian university, ranked highest among private universities and 7th overall in Brazil by the QS World

University Rankings and whose electrical engineering program is unsurpassed as determined by the Brazilian Ministry of Education

- Designed and prototyped a MIDI (Musical Instrument Digital Interface) controller as a graduation project
 - Coursework in Microcontrollers and Embedded Systems, Field-programmable Gate Arrays, Control and Servomechanisms, Analog and Digital Communications, Computer Architecture, Analog Circuits, Power Electronics, and Signals and Systems
 - Participated in workshop covering printed circuit board design and manufacturing techniques
 - Honored for Academic Distinction in Introduction to Engineering course for best group project among all freshman engineering students
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Keywords

Embedded Software
C
Assembly
Ruby

Python
Debugging
Test Driven Development
Sensors