
resume

Jason R. Jones

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LETTER

Greetings -

I am a candidate with a diverse set of skills that are an asset in any modern organization. I have experience including electrical design, mechanical design, manufacturing, tooling, software creation, and data science amongst others. I have a track record of being a product owner from beginning to end, from wiping tables to writing software.

I look forward to speaking with you in the near future,

Jason R. Jones

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TECHNICAL SKILLS



2.1 Microcontrollers & Firmware

I generally prefer a layered architecture in order to reduce the mind share required in order to complete portions of an application. This development method often leads to code which emphasizes function over cyclic efficiency.

I have successfully deployed each of the below architectures into production:

- PIC24/dsPIC33 series development in C, assembly
- PIC10/12/16/18 series development in assembly
- MSP430 series development in C
- STM32 series development in C

I have successfully deployed firmware implementing motor control algorithms, communication protocols (RS-422, RS-485, wireless), and test hardware. I have written safety-critical code, including full code documentation.



2.2 Electrical Engineering

I have been responsible for all aspects of electrical design, from schematic entry, component selection, through layout and cost optimization. Softwares that I have experience with:

- OrCAD Schematic Entry
- Cadence PCB Editor
- KiCAD Schematic/Layout
- Altium Schematic Entry

- Familiarity with DO-178 software design activities
- Familiarity with design to meet DO-160



2.3 Mechanical Engineering

I acquired a hobby of 3D printing during the early days of the rising hobbyist 3D printing. In addition, I had a mentor who allowed me to design mechanical parts and features that eventually made it into production giving me mechanical design skills.

I have been able to hone my initial skillset through product design and tool design.

- SolidWorks
- 3D-printing
- Tool design
- Drawings



2.3.1 Office Productivity

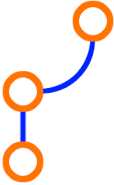
The majority of report generation activities are conducted utilizing MS Word or Word-like software. I generally prefer to utilize styles within the document structure as this leads to a highly maintainable document which is inherently organized and beautifully exported to PDF.

- MS Office Suite * Word * Excel * Powerpoint * OneNote
- LibreOffice Suite



2.4 Software Development

My introduction to software was as a firmware developer. As I continued to develop my skills, I found it necessary to learn other languages in order to become a better firmware developer. Additionally, through that process, I was further exposed to different source control and development methods which increased my productivity and value in my various roles.



2.4.1 Git

I manage a small number of open-source projects. Most of these started out as useful scripts that I found myself utilizing over and over. None of the projects have “taken off”, but many of them have users and have merged pull requests on GitHub. Amongst the git-related skills:

- Routine command-line interaction (stage, commit, branch, merge)
- Working with remotes (push, pull, fetch)
- [GitHub](#), including fork, pull requests
- [Git Flow](#)

2.4.2 C

My skills in C have been primarily focused on microcontroller firmware development and not on application development.



2.4.3 Python

Python has become a favored language for its extraordinary flexibility in a number of applications. I have utilized Python for complimentary testing applications, automated manufacturing testing, backend web development, and data analysis.

- [Sphinx](#) - as evidenced by this document
- [Pyserial](#) - [interfacing with hardware](#); communication protocols
- GUI * tkinter * Qt via [pyside6](#)
- [Flask](#), including flask blueprints
- Application deployment - no external dependencies
- Automated test development for manufacturing environments
- Jupyter Notebooks - utilized for basic data analysis

- [PyTest](#) for automated software testing



2.4.4 Web

I have become familiar with JavaScript through experimentation and development of some toy web sites. I have implemented small web sites which interact with hardware on such platforms as Raspberry Pi and similar.

- [Jinja2](#) templates
- Basic JavaScript
- Basic Bootstrap

2.5 Misc

- Markdown
- reStructured Text
- Spaces, not tabs
- GIMP (basic image manipulation)

EXPERIENCE

3.1 Continuous Improvement Lead

Dates

June 2022 - Present

Company

Moog, Inc; Radford, VA

Responsible for identifying and implementing improvements and change throughout the organization using formal and informal means with little supervision or guidance. In this role, I have been able to distinguish myself as a capable leader with vision in the organization from the conference room to the production floor.

- Identify opportunities for improvement
- Prioritize opportunities by effort vs impact
- Write & deploy automated test
- Production tool design
- Linearize/flow production line for scaling
- Identify & implement equipment purchase, from the mundane to capital
- Write custom user-facing software for tracking facility maintenance
- Educate and mentor other members of the organization, formally and informally
- Documentation at all levels
- Statistical analysis and modeling

3.2 Engineering Manager

Dates

Oct 2020 - June 2022

Company

Moog, Inc; Radford, VA

Responsible for technical leadership and management of engineering department.

- Modernize documentation processes throughout the facility
- Implement more formal design processes
- Plan and coordinate strategic department goals (i.e. training, process)

- Primary engineering contact for customers, internally
- Advise various on-site departments with regard to data management, analytics
- Unify site manufacturing data formats to enable statistical process control
- Create and distribute tools for statistical process control

3.3 Electrical Engineering Manager

Dates

Jan 2019 - Oct 2020

Company

Moog, Inc; Radford, VA

Responsible for technical leadership and management of electrical engineering department.

- Modernize and improve firmware release processes
- Improve productivity of direct reports through exposure to new techniques and technologies
- Advise project managers as to the technical capabilities, workloads, and relative workload of the department
- Improve data visibility and data literacy of the organization by requiring automated testing for throughout the design and deployment cycle
- Develop automated test equipment to replace aging technologies
- Implement informal professional development environment through lunch 'n learn activities
- Lead by example

3.4 Electrical and Firmware Design Engineer

Dates

Dec 2007 - Jan 2019

Company

Moog, Inc; Blacksburg, VA

Responsible for all aspects of electrical design (schematic, layout, and software) for brushless DC and permanent-magnet synchronous motors. Also responsible for documentation of product along with production support.

- Create firmware for real-time applications, primarily motor control, using C and assembly on:
 - TI MSP430 series (16-bit)
 - Microchip dsPIC33 series (16-bit)
 - STMicro STM32 series (ARM 32-bit)
 - Limited exposure to other platforms
- Apply standards such as DO-160, DO-178 to designs
- Improve development workflow for the group by shifting group from directory control into a source control software
- Improve design documentation activities by implementing reports to be attached to engineering change processes
- Improve design quality by implementing design checklists for schematics, layouts, and components

- Apply fundamental reliability techniques, including Weibull analysis
- Develop automated test equipment for my product lines

3.5 Electronics Repair Technician

Dates

May 2007 - Dec 2007

Company

Advanced Electronic Services; Mt. Airy, NC

Component-level diagnosis and repair of uninterruptable power supply board modules with ratings ranging between 2kVA to 800kVA utilizing benchtop troubleshooting equipment, such as oscilloscope, curve tracer, and multimeter.

- Acquire basic soldering proficiency (through-hole, surface-mount)
- Learn the fundamentals of three-phase power

3.6 Fire Support Specialist, Artillery

Dates

August 2000 - August 2004

Company

United States Army; Multiple Locations

Call for, observe, and correct indirect fire from artillery batteries. Advised command-level entities of fire support asset capabilities and availability. Participated in Operation Iraqi Freedom with the 101st Airborne Division 2003 to 2004.

- Develop land navigation skills through training
- Show up to work on-time
- Develop perspective

EDUCATION

4.1 Bachelor of Science



Dates

May 2005 - May 2007

Organization

Old Dominion University

Major

Electrical Engineering Technology

Minor

Mechanical Engineering Technology, Psychology

4.2 Associate of Arts & Sciences



Dates

August 2004 - August 2005

Organization

Wytheville Community College

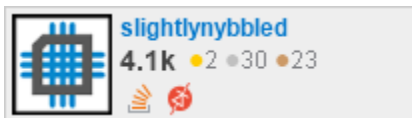
Focus

Science, Education

CONTACT

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5.1 Social Media



Thingiverse

INDICES AND TABLES

- `genindex`
- `modindex`
- `search`