

### **SKILLS**

Python	3+ yrs
Linux	3+ yrs
Git	3+ yrs
Microcontrollers	2+ yrs
C++	2+ yrs
С	2 yrs

### **EDUCATION**

#### **Texas A&M University**

**2012 - 2016, 3.6 GPA**B.Sc. Electrical Engineering.

Senior Design: Realtime Audio Signal Identification and Reconstruction

### CONTACT

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# **JUSTIN GINN**

Hardware Bringup and Verification Engineer

### **PROFILE**

Proven Computer Engineer with a passion for architecting systems and methodologies to allow teams to reach their full potential.

I am intensely curious and self-motivated, and thrive on learning new skills as I apply them to the challenges I am solving. I seek out opporunities to apply vision, innovate, and develop new methodologies to improve business processes and outcomes.

I am a philosophical programmer who loves writing whitepapers to accompany the systems I deliver. Over the course of my career I have discovered a growing interest in software design, especially pertaining to how good software design creates better hardware.

### **WORK EXPERIENCE**

# Microcontroller Assisted Test Lead IBM

Oct 18 - Present

Spearheaded test solution **leveraging firmware code in manufacturing test** to match test to field conditions, improving quality

- Owned boot sequence for Power10 used in manufacturing, bringup, and burn-in
- Drove **presilicon verification** of test functionality, virtual bringup for firmware
- Interfaced with firmware, verification, design, and manufacturing teams to support firmware code at manufacturing test
- Trained new hires and educated stakeholder teams in Microcontroller Assisted Test strategy

#### Technologies:

- Architected Python API to interface with embedded microcontrollers using firmware code written in C++, low level C, and assembly language
- Developed interface between embedded microcontrollers and Automatic Test Equipment using Python to comprehend ELF and DWARF binary formats
- · Managed team's interaction with several large Gerrit repositories
- Implemented test-specific content in firmware repositories, including custom **make** and **linker** infrastructures

#### Achievements:

- IBM Outsanding Technical Achievement Award for Innovation, awarded for Microcontroller Assisted Test
- Reduced test-sector boot time by **70**% generation-over-generation
- First-time-right bringup using Microcontroller Assisted Test strategy

### **SOFT SKILLS**

Vision

**Initiative** 

**Innovation** 

Leadership

Communication

### **FAVORITE TOOLS**

- you should see my .vimrc
- Q ripgrep
- love a good rebase
- A command line junkie
- > mosh is the new ssh

### **PHILOSOPHY**

- fight "black magic", wherever it is believed in
- fight technical debt at any cost
- architect for greatness, prioritize the minimum viable product
- 66 leverage your effort
- everyone is a leader

### **ACTIVITIES**

music production

## Design For Test Engineer

Functional Exercisers Owner for manufacturing test

- Created register-level test sequences to power on, configure, load, and execute functional workloads on the processor
- Delivered test patterns for **Teradyne Ultraflex** and J973 ATE platforms
- Supported voltage droop mitigation sensor testing and calibration for use in **Power Management**
- Interfaced with circuit and system characterization teams to support test to real-world correlation

#### Technologies:

· Automation using Perl, Python and shell scripting in Linux

### **Processor Failure Analysis Engineer**

Jan 17 - Oct 17

Oct 17 - Oct 18

IRM

Root-caused manufacturing test escapes to improve test coverage and Shipped Product Quality Level for Power9

- Delivered enhanced manufacturing test patterns to eliminate a category of test escapes
- Identified opportunities for manufacturing test improvements based on System Level Test feedback
- Assisted with array and functional coverage improvements to support Power9 bringup and General Announcement

#### **Product Engineering Intern**

May 16 - Aug 16

NXF

Created utility to identify and discard unprofitable die locations, improving gross margin, yield, and reliability

 Engaged with Product and Test Engineering teams to understand cost implications of yields at each test insertion

#### Technologies:

· Scripting in **JMP** for data analysis and profitability calculation

#### **Achievements:**

Awarded for best intern presentation in Microcontrollers Division, 2016

#### **Test Engineering Intern**

May 15 - Jul 15

#### **National Instruments**

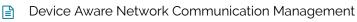
Developed a suite of tools to automatically configure network ports and device configuration in test stations

Designed in-house replacement for LED test equipment, saving a potential \$35,000 over 3 years

#### Technologies:

Used Labview and shell scripting for automation utility

### PATENTS AND PUBLICATIONS



A Framework for Near-Realtime Signal of Interest Identification and Reconstruction for Audio Augmented Reality Applications