Gabriel Gonzalez

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Objective

I am looking for a software engineering internship where I can apply my knowledge of physics, mathematics, and programming to solve new problems and improve existing code. My experiences have prepared me well for learning new technologies and effectively contributing in a team environment.

Computer Skills

Languages: C, IDL, Python, Java, Bash, Assembly, LaTeX

Software: DrJava, Git, Excel, Word

Operating systems: Unix, Windows, Mac OS X

Courses: Computer Systems, Data Structures and Algorithms, Electromagnetic Fields and Waves, Intermediate Mechanics, Methods of Theoretical Physics

Education

Boston University **September 2011 – present**
BA : Astronomy and Physics

- **GPA:** 3.17
- **Expected graduation:** May 2015

Honors

Boston University
Dean's List **Fall 2011**

Experience

BU Satellite for Applications and Training, Boston, MA **September 2014 – present**
Software Developer *~1 month*

- Developing software on the Arduino Mega 2560 that controls when scientific data should be gathered, and then wirelessly sends the data to the central processing unit.
- Writing the drivers for the Analog to Digital Converter.

BU Center for Space Physics, Boston, MA **September 2014 – present**
Research Assistant *~1 month*

- Creating an algorithm to automatically determine the scattered light in an image taken by the IUVS echelle spectograph. The scattered light from the image will then be subtracted from the original image, resulting in an image with just the light from the star.

BU Center for Space Physics, Boston, MA **Summer 2014**
Lab Assistant *~4 months*

- Repaired mechanical and eletrical defects in a damaged vacuum chamber that is used for satellite systems testing.
- Developed software to control stepper motors using an Arduino Mega 2560. The stepper motors control the surface inside the vacuum chamber, on which satellite systems may be placed and tested.

BU Center for Space Physics, Boston, MA **May 2014 – present**
Lab Assistant *~5 months*

- Developing software to analyze the Venus Spectral Rocket mission result data.
- Post flight calibration on the Venus Spectral Rocket echelle imager and spectrograph.

BU Center for Space Physics, Boston, MA **March 2012 – present**
Research Assistant *~2.5 years*

- Classifying solar flare strength and analyzing solar flare activity in the ionosphere of Mars using Mars Global Surveryor radio occultation data.
- Creating a map of the ionosphere of Venus using Pioneer Venus Orbiter *in situ* data.
- Determining the validity of Pioneer Venus Orbiter *in situ* data by comparing mission result data with more recent mission data.

Projects

Gabe's Status Bar **September 16, 2014**

- Status bar that supports custom icon widgets and event signals, meant to replace the non-graphical status bar that comes with Dynamic Window Manager (DWM).
- **Source:** *github.com/gabeg805/Gabes-Status-Bar*

Gabe's Login Manager **August 7, 2014**

- C based login manager I created for fun to customize my Linux system.
- **Source:** *github.com/gabeg805/Gabes-Login-Manager*

USB Device Automounter **April 10, 2014**

- When a USB device is plugged into a linux system, a file is created in */dev* and a symbolic link is created in */dev/block*. My program waits for a file to be created in */dev/block*, mounts the device, and prints the device information to a log.
- My program is composed of several bash scripts that use native commands to Arch Linux, such as *systemd* and *systemctl*.
- **Source:** *github.com/gabeg805/Linux-Scripts/tree/master/programs/automount*

See all of my other projects on **Github!**