# Candice R. Withrow

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#### **SUMMARY**

- · Recent graduate: M.S. in Computer Science, project using Apache Spark
- · B.S. in Physics; Experience using computational methodology to model and learn from data

## **EDUCATION**

M.S., Computer Science, August 2016

Sam Houston State University, Huntsville, TX

GPA: 4.0 on a 4.0 scale

Courses in: Data Mining, Data Science, Distributed Computing, Artificial Intelligence Major projects:

- · Master's project- "Analyzing Astronomical Data Using Apache Spark"
  - · Explored Spark's ability to handle problems involving complex math
  - Used PySpark to process and analyze numerical data, utilizing Spark's Dataframes and Machine Learning library
- · Software Engineering project- SAFE!
  - · Android application (Java) for an increasingly common food allergy
  - · Designed entire concept and database; wrote or oversaw all documentation

B.S., Physics, May 2008

Sam Houston State University, Huntsville, TX

Graduated Magna Cum Laude, GPA: 3.68 on a 4.0 scale

- · Ronald E. McNair Post Baccalaureate Achievement Program scholar
- · Recipient of Earl S. Burrough Scholarship, 2006 2008

Graduate Studies, Engineering, 2011 – 2012

Colorado State University, Fort Collins, CO

Concentration: Mechanical Engineering

Courses in: Advanced Fluid Mechanics, Mechanics of Materials, Alternative Energy

#### SKILLS

## Development

- · Basic skills in Java, Python, SQL
- Requirements Specification, Project Presentation

## Data Analysis

· Apache Spark, Excel, SciPy libraries, statistics and linear algebra

### **EXPERIENCE**

Sam Houston State University | Huntsville, TX | January 2014 to December 2014 Teaching Assistant - Undergraduate Astronomy lab

- · Communicated physics concepts through lectures and demonstration, guiding through lab software and procedure
- · Graded lecture-portion coursework

Colorado State University | Fort Collins, CO | May 2011 to August 2011 Research Assistant

Dr. Don Radford, Professor of Mechanical Engineering; Advanced Materials

- · Conducted thermo-mechanical analysis tests on composites to study thermal expansion and fiber-matrix bonding
- · Measured cohesion of fibers using scanning electron microscope

Fairfield Nodal | Sugar Land, TX | June 2008 to April 2009

Jr. Geophysical Analyst

- · Configured Kirchhoff depth migrations to build high resolution 3D seismic maps
- Performed quality checking before final delivery to clients; archived important stages of processing

Sam Houston State University | Huntsville, TX | June 2006 to May 2008 Research Assistant

Dr. Barry Friedman, Professor of Physics; Theoretical

- · Modeled arrangement of atoms using Fortran in a distributed environment
- · Co-authored paper: B. Friedman and C. Withrow, "Stripes or an Anisotropic Crystal in the N=2 Landau Level?", Physica B 403 1500 (2008)

Dr. Brian Oetiker, Associate Professor of Physics; Observational Astronomy

 Used IRAF and IDL languages to process batch images and identify potential extrasolar planets