

Kristin L. Berry

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Objective

To obtain a position as a GIS Developer or software developer working with remotely sensed data.

Skill Highlights

GIS and Remote Sensing Software: ESRI ArcGIS Pro 10.7 (Novice), QGIS (Novice), SOCET GXP (Novice), ERDAS IMAGINE (Novice)

Programming Languages: C++ (Advanced), Python (Intermediate), Shell Scripting in bash and tcsh (Intermediate)

Databases: MySQL (Intermediate), PostgreSQL (Intermediate), PostGIS (Intermediate)

Experience

USGS Astrogeology Science Center, *Contractor to Pathways Trainee (Info Tech)* *May 2014-present*
Flagstaff, AZ

- Worked as part of a team on developing USGS's Planetary Imaging Software, ISIS3, a large imaging and cartography software system written in C++.
- Developed new camera models, distortion models, and supporting software infrastructure to process planetary remotely-sensed data from spacecraft missions.
- Wrote bash and python scripts which use ISIS3 to produce controlled mosaics, map-projected images, and geometrically and photometrically-corrected data.
- Coordinated with members of spacecraft mission teams to understand and achieve desired software outcomes.
- Led a small team on a project from funding to completion to modernize the organization of and add automated testing to SPICE (exterior orientation) data bundled with ISIS3.
- Collaborated on the USGS Community Sensor Model photogrammetric software and other smaller planetary spatial data processing software packages written in C++ and python.

Northern Arizona University, *Graduate Teaching Assistant* *September 2013 - May 2015*
Flagstaff, AZ

- Taught four non-major astronomy lab sections (AST 181), one algebra-based mechanics lab section (PHY 111,) one calculus-based mechanics lab section (PHY 161,) and five algebra-based electricity and magnetism lab sections (PHY 112) over four semesters.
- Developed lectures, quizzes, and a final exam for an introductory astronomy lab course.
- Took the initiative to update the Astronomy lab manual after the purchase of new telescopes required modifications to existing labs.

MIT Planetary Astronomy Lab, *Research Assistant and Thesis Work* *Jan. 2012-Aug. 2013*
Cambridge, MA and Flagstaff, AZ

- Automated astronomical image processing (astrometry,) using a python script.
- Set up a mysql database to store information about astronomical occultation events.

MIT Information Services & Technology, *Linux Consultant* *Sept. 2012 - June 2013*
Cambridge, MA

- Provided user support over the phone and via the RT ticketing system about MIT's Debian-based Linux distribution and its software.

- Solved user problems using knowledge of shell scripting and configuration files on Linux systems.
- Wrote and edited online knowledge-base documentation to reflect changes in the system, address frequently asked questions, and re-organize important information for ease-of-use.

Seager Exoplanet Research Group, *Research Assistant*
Cambridge, MA

May 2010-Jan. 2011

- Implemented a Box-fitting Least-squares algorithm in C++ to identify binary stars in a very large set of image data.
- Modified existing code in Matlab to simulate detailed exoplanet transits for specific stellar and planetary parameters.

Pegasystems, *Software Engineering Intern*
Cambridge, MA

Jan. 2009 - Sept. 2009

- Developed a graphical software application to meaningfully track software development and system performance using Java.
- Ran software builds, performed weekly maintenance, diagnosed and repaired problems with development servers.

Paragon Corporation, *Programmer/Consultant*
Boston, MA

Sept. 2008 - Jan. 2009

- Solved Geographic Information Systems (GIS) technology problems using the OpenLayers API.
- Developed and supported web applications to client specifications using Apache, PHP, MySQL, IIS, VB.net, and SQL Server.
- Gave clients clear, step-by-step instruction in basic Linux use and introductory programming in Python over the phone.
- Scripted database backends to support web applications in PostgreSQL and SQL Server.

Education

University of West Florida *Pensacola, FL* *(expected) December 2020*
Geographic Information Science Certificate
◇ Relevant Coursework: GIS Programming, Remote Sensing and Photo Interpretation, Applications in GIS, Special Topics in GIS

Northern Arizona University *Flagstaff, AZ* *2013 - 2016*
Graduate Coursework in Applied Physics

Massachusetts Institute of Technology *Cambridge, MA* *June 2013*
S.B. in Earth, Atmospheric, and Planetary Sciences
