Christina Branson

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TECHNICAL SKILLS
PHP, HTML5, JavaScript, jQuery, CSS, MySQL, MS SQL Server, Wordpress, Java, C++, C#, Perl, Matlab, IBM Cognos, MS Office, Nuxeo, SharePoint, Git, Subversion, CompTIA Security+ Certification

PROFESSIONAL EXPERIENCE
Software Engineer, ARCHARITHMS, INC., Huntsville, AL, 2013 to 2016
- Key Software Personnel for development of the web-based software aggregation and analytics component of the United States Army Corps of Engineers (USACE) Meter Data Management System (MDMS) where responsibilities included:
  - Analyzed the existing MVC .NET application and MS SQL databases to determine gaps in the technical requirements and develop software and architecture enhancements for future development
  - Modified the models and reports in the IBM Cognos business intelligence tools to fix errors and optimize report performance
  - Supported proposal development, requirements specifications, labor estimates, and scheduling for key software tasks for the MDMS Program
- Lead developer for a PHP-based eCommerce website where responsibilities included:
  - Developed a minimum viable product using an existing PHP eCommerce framework, heavily modified to integrate data from the Amazon Product Search API. The website also integrated with Facebook for login and sharing and with various payment APIs
  - Developed an improved backend and database schema to optimize performance
  - Developed the front-end of the application using HTML5 and jQuery based on the Foundation framework
  - Developed scripts using Javascript (using CasperJS and PhantomJS) to automate purchasing and to web-scrape missing data
- Supported development for the DoD C-RAM C2 Program where responsibilities included:
  - Developed models to simulate manned and unmanned aircrafts using Java and performed analysis to support requirements development for the C-UAS capability
  - Created analysis and log file parsing scripts utilizing Perl
- Authored technical documents and manuals; developed and maintained software, analyzed software performance
- Installed and maintained servers and applications for the company including websites, content management servers, Git/Subversion repositories, Jenkins CI tools, and backup systems

Software Engineer, OPTICAL PROCESSING TECHNOLOGIES and SYSTEMS Inc., Huntsville, AL, 2012 to 2013
- Led a seminar as part of the University Of Alabama in Huntsville Mathematical Sciences Colloquium which explored the theoretical foundation of Principal Component Analysis (PCA)
- Programmed within Octave an implementation of PCA directly from the algorithm to be used in classification software for Optical Character Recognition (OCR) and expanded the capabilities of the OCR using blob detection and Fourier techniques to find randomly placed digits in an image

Graduate Research Assistant, UAH ATMOSPHERIC SCIENCES DEPARTMENT, Huntsville, AL, 2010 to 2012
- Performed statistical analysis to compare the performance of a control model run and an assimilated satellite observed cloud model run in simulating cloud fraction and aerosol concentrations. The model results were evaluated against satellite cloud cover observations and ground-based aerosol monitoring stations.
- Wrote original code using IDL and Fortran to calculate statistics, averages, and error on separate domains and time scales and generate graphs for visualization and presentation
- Prepared and edited research proposals US Government agencies

EDUCATION
Master of Science, Atmospheric Sciences, University of Alabama in Huntsville, Huntsville, AL, 2012
Bachelor of Science, Mathematics/Physics, Rowan University, Glassboro, NJ, 2009

OTHER
US Citizen; Secret Clearance (Active)