Joshua Holbrook

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Skills and Qualifications:

- Proficient with Microsoft Office suite and GNU/Linux; and experience with COMSOL Multiphysics
- Proficient with MATLAB and python/scipy, experience with bash and javascript and Exposure to C(++), Perl and PHP;
- Certified LabVIEW Associate Developer

Education:

Master of Science in Mechanical Engineering   *Sept. 2009 – Dec. 2010 (expected)*
Minor in Mathematics
Completed 15 Credit Hours
3.68 current GPA

Bachelor of Science in Mechanical Engineering, Cum Laude   *Aug. 2005 – May 2010*
3.67 GPA

High School Diploma   *May 2005*
3.73 GPA

Projects:

Node-Chess   *August 28, 2010 – August 29th, 2010*

- A Node Knockout contest submission
- Personally responsible for most of the art and some of the UI
- Written in only 48 hours
- Hosted at http://dark-knights.no.de

Lulzbot   *July 2010 – Present*

- IRC Bot
- First significant project in javascript and node.js
- Watches github, checks weather
- Lulzbot-X in irc://irc.freenode.net/#stackvm

The Determination of Anisotropic Thermal Conductivity with Thermal   *May 2010 – Present*
Needle Probe Measurements

- Masters Thesis
- Involves 3-D modeling with comsol and matlab to simulate thermal needle probe measurements

Methlabs   *June 2010 – August 2010*

- A collection of tools for Matlab
- m-files inspired by functional programming paradigms such as those in Haskell
- Includes a python script that allows shebanged scripts to be interpreted by Matlab

Counting of Stream Crossings Along a Path Between Two Given   *March 2010 – May 2010*
Alaskan Villages

- Used python and qgis
- First experience with ESRI shapefiles and GIS in general
- Part of a feasibility study on laying unburied fiber optic cable over tundra in remote regions of Alaska

Super Four-Bar Explorer   *December 2008*

- A program written in python that uses a Gauss-Newton unconstrained optimization algorithm to fit the path traced by a four bar linkage to a given set of points
- Accompanied by a spreadsheet that illustrates four-bar linkage traced paths

Service:

American Society of Mechanical Engineers, Student Chapter   *September 2009 – May 2010*

- Administered web site and facebook page
- Volunteered at E-Week activities

Employment History:

Research Assistant   *January 2010 – Present*
UAF Institute of Northern Engineering, Fairbanks AK
Job duties include:

- Designing and running finite element models using COMSOL and MATLAB
- Analyzing geographical information using perl, python, MATLAB and C++

Office Assistant   *January 2008 – December 2009*
UAF Mechanical Engineering Department, Fairbanks AK
Job duties include:

- Tracking purchase information on UAF's Oracle database and compiling it into a human-readable form
- Facilitating communication between students, faculty and system administration

Professor' Assistant   *September 2008 – December 2008*
UAF Mechanical Engineering Department, Fairbanks AK
Job duties include:

- Grading and correcting homework assignments for ES 331, "Mechanics of Materials"

Painter   *May 2008 – August 2008*
UAF Conference Services, Fairbanks AK
Job duties include:

- Patching, painting and wet-sanding walls, ceilings, doors and trim

Construction   *May 2007 – June 2007 full-time January 2008 – Present on irregular basis*
Laborer
Panco Construction, Talkeetna
AK
Job duties include:

- Sanding, polishing and assisting in the fabrication of solid surface
- Stocking, staging and assisting in the install of countertops other materials

Laboratory Assistant   *February 2007 – May 2007*
UAF Water and Environmental Research Center, Fairbanks AK
Job duties include:

- Taking inventory of chemical stock
- Tabulating, manipulating and organizing test data in Excel

Porter   *May 2006 – August 2006*
Aramark-Harrison Lodging, Denali National Park AK
Job duties include:

- Stocking; cleaning and maintaining public areas; and preparing rooms for guest arrival