Joshua Holbrook

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Skills and Qualifications:

- Expert in server-side JavaScript (node.js); Knows JavaScript, python & bash; Experience with R, MATLAB & LabVIEW
- Theoretical and practical experience with numerical methods focusing on multivariate nonlinear optimization and boundary value problems
- Proficient with Microsoft Office suite and vim; And experience with COMSOL Multiphysics 3.5 and emacs
- Expertise in engineering/laboratory measurements and instrumentation hardware

Education:

Master of Science in Mechanical Engineering *Sept. 2009 – May. 2011*
University of Alaska Fairbanks
Thesis: The Determination of Anisotropic Thermal Conductivity with Thermal Needle Probe Measurement
3.62 GPA

Bachelor of Science in Mechanical Engineering, Cum Laude *Aug. 2005 – May 2010*
University of Alaska Fairbanks
Minor in Mathematics 3.67 GPA

High School Diploma *May 2005*
Susitna Valley Jr/Sr High School
3.73 GPA

Projects:

The Determination of Anisotropic Thermal Conductivity with Thermal Needle Probe Measurements *May 2010 – May 2011*

- Masters Thesis
- Numerical component involving 3-D modeling with comsol and matlab to simulate thermal needle probe measurements
- Lab measurement component involving engineered anisotropic materials

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

- 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

Service:

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

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

Awards & Grants:

Center for Global Change Student Research Grant *May 2010*

- Project title: "Determining Anisotropic Thermal Conductivity of Snow with Needle Probe Measurements"
- Awarded $8200

3rd Place, 2010 Campus Research Day Undergraduate Symposium *April 9th, 2010*

- Project title: "Development and Benchmarking of Optical Touchscreen User Interface Technology"
- Awarded $1000

Undergraduate Research Grant *October 2009*

- Project title: "Development and Benchmarking of Optical Touchscreen User Interface Technology"
- Awarded $2250

Employment History:

Head of Support *June 2012 – December 2012*
Nodejitsu Inc., San Francisco CA
Job duties include:

- Managing and training junior support engineers
- Monitoring IRC, email, twitter and other sources for support requests
- Triaging and investigating issues with Nodejitsu software, servers and cloud providers
- Maintaining, bugfixing and managing releases for the Flatiron framework and Nodejitsu's open-source software
- Developing and maintaining internal support infrastructure and tooling

Teaching Assistant *September 2010 – May 2011*
UAF Mechanical Engineering Department, Fairbanks AK
Job duties include:

- Grading homework and designing quizzes for ES 346, Basic Thermodynamics
- Grading homework for ME/ENVE 458/658, Energy and the Environment
- Grading homework for ME 403, Machine Design
- Redesigning and conducting laboratory experiments for ME 415, Thermal Systems Lab

Research Assistant *January 2010 – August 2010*
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++

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