

# Jeffrey Robert Hammel

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## Summary

Software engineer with background in Un\*x/Linux; automation and tools; testing; continuous integration; monitoring of distributed systems; deployment engineering; packaging; docker and containerization; web development; open source software; software ecosystems; information curation and analysis; scientific computing; computational geometry.

I create high quality and focused products, tools, and technologies. I seek a position where I can do useful and interesting things through learning and application of knowledge.

## Software Development Experience

### Technical Lead - Cisco Systems

#### Metal as a Service

*September 2016 - February 2017*

Quality engineer for transregional Kubernetes based bare metal cloud service. Deployment of concourse.ci continuous integration in GKE and construction of testing and deployment pipelines.

#### Infinite Video (SPVSS)

*June 2015 - September 2016*

Monitoring and testing of HTTP Live Streaming video control plane, data plane, and point product using Sensu for continuous quality assurance of Infinite Video systems. Deployment into Centos/AWS hybrid linux environments using salt. Development of CDN containerized speedtest software for report to Elasticsearch.

### Senior Software Engineer - Cognitive Networks *January 2014 - June 2015*

Analytic measurement of distributed video automatically content recognition (ACR) system for continuous monitoring and validation. Time-dependent and aggregate testing of video ACR using a headless client including quantitative analysis of results. Data verification and regression testing. Automated deployment, monitoring, and maintenance in an AWS EC2 Linux environment. Validation of multistep SQS-queued data pipeline into Redshift as well as verification of MySQL data for MVPD identification. Development of python, bash, and C ACR-related tools and technologies.

## **Software Engineer - Mozilla**

*March 2010 - December 2013*

Worked as part of Automation and Tools Engineering team to enhance, extend, and maintain Mozilla's testing infrastructure and developer software tool ecosystem.

- Development and consolidation of python and JavaScript library code for building test harnesses and tools targeting Firefox and related software.
- Developed and maintained python and JavaScript test harnesses for conducting HTML and HTTP correctness and performance tests. These harnesses typically drive Firefox, inserting an extension, and report results via Mozilla's buildbot continuous integration system.

## **Software Engineer - The Open Planning Project**

*August 2006 - January 2010*

- Developed python WSGI HTTP web applications and services using a wide variety of frameworks and tools including HTML and JavaScript
- Participated actively in several open-source communities, including python, Trac, and Zope
- Deployed and maintained web sites and internal software systems including setup of buildbot continuous integration and development of in house build system.

## **Research Experience**

### **Graduate Student Researcher - Plasma Theory and Simulation Group, University of California at Berkeley**

*August 2001 - August 2006*

- Particle-in-cell kinetic modeling plasma resonances and DC discharges for plasma processing applications
- Expertise in numerical methods with emphasis on parallel computing (MPI) in C/C++
- Served as system administrator of a Linux cluster of research computers and development of helper scripts and tools

### **Research Assistant - Computational Gas and Plasmadynamics Laboratory, Worcester Polytechnic Institute**

*June 2000 - August 2001*

- Development of an 2nd-order accurate electrostatic solver on 3d unstructured Voronoi tetrahedral meshes
- Computational modeling of rarified gas and plasma flows

## Teaching Experience

### **Instructor, Part Time - Art Institute of California in San Francisco** *January - Summer 2006*

Taught undergraduates operating systems, design patterns, and data structures in the Visual and Game Programming department. Lectured and developed curricula.

### **Graduate Student Instructor - University of California at Berkeley**

**E170B: Introduction to Modeling and Simulation II, Professor Verboncoeur** *Spring 2006*

**EE117: Electromagnetics, Professor Gustafson** *Fall 2001*

## Education

### **University of California at Berkeley** *August 2001 - August 2006*

Ph. D. program, Electrical Engineering and Computer Science  
*All but dissertation; left to pursue position at The Open Planning Project*

### **Worcester Polytechnic Institute** *June 2000 - August 2001*

Master of Science, Mechanical Engineering

### **Worcester Polytechnic Institute** *August 1996 - May 2000*

Bachelor of Science, Mechanical Engineering  
National Merit Scholar

Internship - NASA Glenn Research Center *Summer 1999*

## Publications

- J. Hammel, K. Kovalev, N. A. Gatsonis, "Unstructured Adaptive Monte Carlo Simulations of Flows in Micronozzles", AIAA Paper 2001-2891, presented at the 35th AIAA Thermophysics Conference, Anaheim, CA, June, 2001.
- Jason R. Potts, Stephen W. Pierson, Paul P. Mathisen, Jeff R. Hammel, Vlad C. Babau, "Wind Energy Resource Assessment of Western and Central Massachusetts", AIAA Paper 2001-0060, 2001.