

## Experience

- **Technical Support Engineer** April 2015 - Present  
*Urban Airship* Portland, OR
  - Support Urban Airships customers ranging from mobile developers to marketers.
  - Custom mailing software for sending personalized emails to customers in Node.js
- **Web & Systems Developer** May 2014 - April 2015  
*PSU Office of Information Technology - Academic & Research Computing* Portland, OR
  - Web applications and systems programming with Python and Django.
  - Implemented and designed a Github style email correspondence bridge for ARC's ticketing system.
  - Implemented user tracking and notification system for ARC's research systems.
  - Writing package that tracks MySQL and Postgres database activity of ARC's hosted projects.
- **Systems Administrator** May 2013 - April 2015  
*PSU Office of Information Technology - Academic & Research Computing* Portland, OR
  - Responsible for building, automating and monitoring PSU's research servers and Linux Clusters.
  - Initiated efforts to automate cluster deployment and management using configuration management.
  - Launched a successful user support documentation website to orient new users on the available research systems.
  - Trained and introduced new users to ARC's resources and shared unix computing environments.
- **Research Assistant to Dr. Erik Sanchez** May 2013 - April 2015  
*PSU Sánchez Nano Development Lab* Portland, OR
  - Wrote custom control software and a web application that enabled remote viewing and operation of a Scanning Electron Microscope over the internet using Web Sockets and WebRTC.
- **Lab Instructor & Teachers Assistant** September 2012 - December 2014  
*Portland State University* Portland, OR
  - Instructed PSU's General Physics Labs and assisted in the upper division Experimental Physics Labs.
  - Developed two novel labs on the use of microcontrollers and FPGAs covering basic concepts to advanced topics like PID control theory.
- **Textbook Development Consultant** January 2012 - July 2012  
*Cardinal TS* Remote in Ashland, OR
  - Front end Javascript development for a interactive calculus textbook website for Wiley Publishing.
  - Provided conceptual content and calculus interpretation for other members of the development team.
- **Research Assistant to Dr. C.D. Hoyle** May 2009 - September 2011  
*HSU Gravitational Research Laboratory* Arcata, CA
  - Designed and machined custom experimental instruments and developed the lab's data collection, automation and analysis software to study the gravitational inverse-square law at sub-millimeter distance scales.
- **Research Assistant to Dr. David Kornreich** November 2009  
*The Arecibo Legacy Fast ALFA Survey* Arecibo, Puerto Rico
  - Trained and operated one of the worlds largest radio telescopes and analyzed the collected data searching for previously undiscovered galaxies.

## Education

- **Masters in Applied Physics** September 2012 - April 2015  
*Portland State University* (On leave) Portland, OR
- **Bachelor of Science in Physics** August 2006 - May 2011  
*Humboldt State University* Arcata, CA

## Skills

### Operating Systems, Languages, & Applications

- **Fluent:** Linux/Unix, OS X, Windows, Javascript/Node/npm, Python/Django, Git/Github, Travis-CI, HTML/CSS/SCSS, Ansible, Mathematica, LabVIEW, L<sup>A</sup>T<sub>E</sub>X
- **Familiar:** Go, Ruby/Rails, Flask, electron, sh, MySQL, SQLite, PostgreSQL, Assembly, C/autotools, regex, LevelDB
- **On the Radar:** Haskell, Rust, Puppet, Docker/Rocket, NixOS

**Character:** Demonstrated proficiency with public communication skills. Exceptional troubleshooting and debugging skills. Adept at rapidly learning new programming languages and tools. Local and remote collaborative skills and methods. Excels at teaching and working with others. Goal driven. Positive.

## Publications, Talks, Community Involvement & Leadership

- **W3C Social Web Working Group** July 2014 - June 2015  
*Invited Expert*
- **Code for Portland** March 2014 - Present  
*Organizer & Volunteer*
- **“Development of an Online Teaching Field Emission SEM”** February 2014  
*Proceedings of the Oregon Academy of Science*
- **Homebrew Website Club** December 2013 - Present  
*Organizer*
- **“Remote Operation of a Scanning Electron Microscope using WebRTC”** October 2013  
*WebRTC Camp*
- **“Distributed Social Web Interactions with Semi-Static Websites”** August 2013  
*OSFW3C Workshop on Social Standards: The Future of Business*
- **IndieWebCamp** 2013, 2014 - Present  
*Participant and Organizer*
- **PSU Manufacturing and Fabrication for the Sciences Club** 2013 - December 2014  
*Officer*
- **“Sub-millimeter Positioning and Sensing for Short-Range Gravity Tests”** 2011  
*Proceedings of the 25th National Conference on Undergraduate Research (NCUR)*

## Recent Open Source Contributions

- **Node Learnbook** E-Book  
[github.com/bcomnes/node-learnbook](https://github.com/bcomnes/node-learnbook)
  - A book about how and where to learn about node and javascript
- **SEMterface** Node.js  
[github.com/SEMterface](https://github.com/bcomnes/SEMterface)
  - Enables realtime remote operation of a JEOL-6400 Scanning Electron Microscope.
  - Custom web application uses WebRTC and Web Sockets to provide realtime interactions with the microscope.

**Github:** See <https://github.com/bcomnes> for more contributions!