

# Josh Holbrook

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## Projects

- Cackledaemon ★4 April 2020 - Present  
A PowerShell module for managing a Windows 10 Emacs install that includes an installer and update wizard, functions for daemon management and a notification icon built with Windows Forms
- PSeudo ★32 April 2020  
A PowerShell module for privilege escalation using named pipes and .NET binary serialization
- IHydra ★9 January 2020 - February 2020  
A Jupyter kernel for hydra, a video synth written in JavaScript using WebGL, using code from the IJavaScript Jupyter kernel, Electron and React
- korbenware ★9 April 2019 - Present  
An ongoing effort to write a Linux desktop management suite using Python and Twisted, which includes an implementation of XDG autostart, a XDG spec compliant application launcher, an XDG menu TUI, journald log integration and a DBus RPC framework
- twisted\_ipython ★4 June 2019  
An IPython extension using Crochet that enables Twisted autoawait support in IPython and Jupyter notebooks
- pyee ★211 July 2011 - Present  
A Python port of the Node.js EventEmitter with special support for concurrency and async frameworks
- ecstatic ★912 November 2011 - May 2019  
A fully-featured static file serving middleware for Node.js

## Employment History

- DoubleVerify, Social Integrations July 2020 - Current  
Staff Data Engineer New York NY
- Led project planning, design and development of a green field hybrid streaming/batch pipeline for managing allow lists for Facebook videos, shipping an MVP in only 7 weeks and scaling to tens of millions of entries
  - Developed an internal data engineering framework for Python with a focus on type safety, first class support in PyCharm and developer tooling
  - Owned the Engineering Bi-Weekly meeting, where engineers shared department-wide updates and gave presentations on a bi-weekly basis
  - Mentored and trained other engineers on the team through pair programming, documentation and videos
- Squarespace Inc, Finance Products July 2019 - January 2020  
Senior Software Engineer New York NY
- Supported and maintained financial data pipelines used for ASC606 revenue recognition, cash and tax reporting and financial planning for a multi billion dollar web site host
  - Identified and implemented several improvements to development and deployment tooling and processes to improve team velocity and reduce bugs
  - Spearheaded proposals to onboard billing and payments data onto a data vault reference architecture to improve velocity and decrease bugs, and to rearchitect reporting to mirror industry standard BI tools
  - Designed and instituted an on-call process to ensure that support work was spread evenly
- Gizmodo Media Group, Data Engineering September 2016 - May 2019  
Senior Developer New York NY
- Acted as the technical lead to deliver Amazon affiliate program commerce analytics involving three teams and multiple contractors, providing experiment data used to optimize conversions on a front page redesign
  - Architected an A/B testing API so experiments could be configured with a web UI instead of disparate scripts
  - Owned internal analytics and recommendation systems that served over 100 million users a month; overhauled legacy systems and implemented monitoring, vastly decreasing total outages and virtually eliminating undetected outages
  - Participated in designing and building a greenfield data warehouse using Python, AWS RedShift and Looker
  - Ported the organization's microservice framework from Scala and Play to Python and Flask to enable development of services by the data team
  - Mentored junior employees on the team

Condé Nast, Copilot API  
Software Developer

February 2014 – August 2016  
New York NY

- Wrote HATEOAS-inspired graph-capable content relationships API that supported the data modeling needs of over a dozen brands using Condé Nast's greenfield internal CMS
- Worked on the team that launched Vogue Runway's real time fashion show coverage during New York Fashion Week, including leading a data migration that replatformed over a decade of content

i.TV LLC  
Software Engineer

August 2013 – November 2013  
Provo UT

- Developed new features and debugged memory leaks in internal content creation and management tools with CoffeeScript and AngularJS to enable real-time creation and curation of live content created over the course of a full TV episode

Nodejitsu Inc  
Head of Support

July 2011 – December 2012  
San Francisco CA

- Managed and trained other support engineers
- Monitored support channels such as IRC, email and Twitter for support requests
- Triaged and investigated live production issues with Nodejitsu software, servers and cloud providers
- Maintained, fixed bugs and made releases of modules in the Flatiron framework and Nodejitsu's open source software
- Developed and maintained internal support infrastructure and tooling

## Skills

**Languages:** Bash, JavaScript, PowerShell, Python, Scala

**Operating Systems:** Arch Linux, OSX, Ubuntu Linux, Windows 10

**Cloud Platforms:** AWS, GCP, DigitalOcean

**Frameworks:** Electron, Express, Flask, Hapi, Node.js, Play Framework, Twisted

**Data Engineering:** Airflow, Spark, Jupyter, LookML, Kafka, Numerical Methods, Pandas

**Databases:** RedShift, CouchDB, Solr, BigQuery, MongoDB, MySQL, PostgreSQL, Vertica

**Backend Engineering:** gunicorn, Microservices, NGINX, REST, RabbitMQ, Redis

**DevOps:** Ansible, DataDog, Docker, Jenkins, Kubernetes, NewRelic, NixOS, Puppet, ChatOps, systemd, Terraform, Vagrant

**Web Technologies:** CSS, HTML, JSON, Node.js, React

## Education

Master of Science, Mechanical Engineering  
University of Alaska Fairbanks

September 2009 – May 2011  
GPA: 3.62

Thesis: *The Determination of Anisotropic Thermal Conductivity with Thermal Needle Probe Measurement*

Bachelor of Science, Mechanical Engineering(Minor: Mathematics)  
University of Alaska Fairbanks

August 2005 – May 2010  
GPA: 3.67

High School Diploma  
Susitna Valley Jr/Sr High School

May 2010  
GPA: 3.73