

Josh Holbrook

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Employment History

Procore Technologies, Embedded Site Reliability Engineering August 2022 – January 2024
Staff Software Engineer Remote

- Led embedded engagements to accomplish infrastructure milestones
- Became a subject matter expert and evangelist for SLOs, educating my team and driving SLO adoption
- Collaborated and drove consensus among technical leaders
- Acted as a “force multiplier”, increasing team velocity by mentoring and unblocking other engineers on my team
- Proposed the creation of a data analysis framework for operational insights, which evolved into a major multi-quarter initiative to ETL data into DataBricks using TypeScript
- Developed a circuit breaker to disable file uploads when NFS was unavailable, virtually eliminating a failure mode that could cause a full outage
- Acted as first-line on-call for the core application
- Offered operational support for Terraform

Eaze, Core Services October 2021 – August 2022
Staff Engineer Remote

- Added OpenTelemetry support to the bolzmann framework, preparing Boltzmann service for migration from Honeycomb beelines
- Developed a migration toolchain and pipeline for SQL Server, improving safety and speed of .NET development
- Made recommendations for hiring decisions and process changes, many of which management adopted

DoubleVerify, Social Integrations July 2020 – October 2021
Staff Data Engineer New York, NY

- Led project to develop a hybrid streaming/batch pipeline for social media advertising data, shipping an MVP in only 7 weeks and scaling to tens of millions of content items
- Developed an internal data engineering framework with a focus on first-class PyCharm support, confidence in correct code and rapid development
- Owned the Engineering Bi-Weekly meeting, where engineers shared department-wide updates and gave regular presentations
- 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
- 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 support work was evenly spread

Gizmodo Media Group, Data Engineering September 2016 – May 2019

Senior Developer New York, NY

- Acted as the technical lead to deliver Amazon affiliate marketing program commerce analytics involving three teams and multiple contractors, providing experiment data to optimize conversions on a front page redesign
- 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
- Architected an A/B testing API so experiments could be configured with a web interface instead of disparate scripts
- Designed, built and maintained ETL jobs for a rapidly growing 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 February 2014 – August 2016
Software Developer New York, NY

- Wrote HATEOAS-inspired graph-capable content relationships API that supported data modeling needs of over a dozen brands using Condé Nast's greenfield internal content management system
- Developed and supported custom components for Vogue Runway's real time fashion show coverage, launching during New York Fashion Week 2015, including a custom content import interface and a data migration that re-platformed over a decade of content

i.TV LLC August 2013 – November 2013
Software Engineer Provo, UT

- Developed new features and debugged memory leaks in internal content 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 July 2011 – December 2012
Head of Support 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

UAF Mechanical Engineering Department September 2010 – May 2011
Teaching Assistant Fairbanks, AK

- Graded homework and designed quizzes for ES 346, Basic Thermodynamics
- Graded homework for ME/ENVE 456/656, Energy and the Environment
- Graded homework for ME 403, Machine Design
- Redesigned and conducted laboratory experiments for ME 415, Thermal Systems Lab

UAF Institute of Northern Engineering January 2010 – August 2010
Research Assistant Fairbanks, AK

- Designed and ran finite element models using COMSOL and MATLAB to study anisotropic thermal conductivity in snow using needle probes

- Analyzed geographical information using Perl, Python, MATLAB and C++

UAF Mechanical Engineering Department
Office Assistant

January 2008 – December 2009
Fairbanks, AK

- Tracked purchase information on UAF's Oracle database and compiled it into a human-readable form
- Facilitated communication between students, faculty and system administration

UAF Conference Services
Painter

May 2008 – August 2008
Fairbanks, AK

- Patched, painted and wet-sanded walls, ceilings, doors and trim

UAF Mechanical Engineering Department
Homework Grader

September 2008 – December 2008
Fairbanks, AK

- Graded and corrected homework assignments for ES331, Mechanics of Materials

Panco Construction
Construction Laborer

May 2007 – June 2007
Talkeetna, AK

- Stocked, staged and assisted in the install of solid surface countertops, shower enclosures and windowsills
- Sanded, polished and assisted in the fabrication of solid surface countertops, shower enclosures and windowsills

UAF Water and Environmental Research Center
Laboratory Assistant

February 2007 – May 2007
Fairbanks, AK

- Took an inventory of all chemical stock in the laboratory
- Tabulated, manipulated and organized well water test data in Excel to deliver reports to homeowners

Aramark-Harrison Lodging
Porter

May 2006 – August 2006
Denali National Park, AK

- Stocked carts with linen, tarry and supplies for housekeepers
- Cleaned and maintained public areas, including bathrooms
- Prepared rooms for guest arrival
- Handled individual guest requests

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
University of Alaska Fairbanks
Minor: Mathematics

August 2005 – May 2010
GPA: 3.67
Cum Laude

High School Diploma
Susitna Valley Jr/Sr High School

May 2010

Projects

pyee - 211 Stars	July 2011 - Current
A Python port of Node.js's EventEmitter with special support for concurrency and async frameworks	
old memes	July 2011 - Current
An old school Node.js anti-framework, built around classic Node.js modules, developed as a labor of love over the last decade	
plusdeck	October 2023 - Current
A reverse-engineered Python driver for the Plus Deck 2C PC Cassette Deck	
Matanуска BASIC	June 2022 - Current
An ongoing project to learn how to write a BASIC interpreter	
resume	2011 - February 2024
My resume, written in LaTeX and featuring a custom class and LaTeX DSL, maintained for over 10 years	
korbenware	April 2019 - June 2023
A Linux desktop management suite using Python and Bash, which includes an implementation of XDG autostart, an application launcher, and an XDG menu TUI	
coprctl	June 2023
A wrapper around copr-cli which affords a Kubernetes-inspired IaC interface for COPR	
omsxctl	August 2022
A Rust CLI tool for controlling the openMSX emulator over its socket API	
Pseudo	April 2020
A PowerShell module for privilege escalation using named pipes and .NET binary serialization	
cackledaemon	April 2020
A PowerShell module, written in Org Mode, 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	
twisted_ipython	June 2019
An IPython extension using Crochet which enables Twisted autoawait support in IPython and Jupyter notebooks	
IHydra	January 2020 - February 2020
9 Stars	
A Jupyter kernel for hydra, a video synth, written in JavaScript and WebGL, using Electron, React and code adopted from the IJavaScript Jupyter kernel, with an accompanying YouTube video	
korben-twitter	January 2014 - August 2019
A Twitter bot that used Markov chains to make procedurally generated tweets as my pet budgerigar, rewritten multiple times in many languages over the course of its operation	
ecstatic	November 2011 - May 2019
912 Stars	

A fully-featured static file serving middleware for Node.js

gshell.py

June 2019

A port of Glib's gshell library to Python

Counting of Stream Crossings Along a Path between Two Given Alaskan Villages

March 2010 – May 2010

A feasibility study for laying unburied fiber optic cable over tundra in remote regions of Alaska using Python, qgis and ESRE shapefiles

The Determination of Anisotropic Thermal Conductivity with Thermal Needle Probe Measurements

May 2010 – May 2011

A master's thesis on the theory and viability of measuring anisotropic thermal conductivity in snow with needle probes, including 3D finite element models in COMSOL and MATLAB; an analytical model; a prototype experimental procedure for benchmarking the technique; and the first attempt at using the technique against real snow

Development and Benchmarking of Optical Touchscreen User Interface Technology

October 2009 – April 2010

A prototype desk-sized touchscreen using a hand-crafted rear projection screen, the pymt Python multitouch library, and a technique similar to Frustrated Internal Total Reflection

Awards

Center for Global Change Student Research Grant

May 2010

Project: *Determining Anisotropic Thermal Conductivity of Snow with Needle Probe Measurements*

Award: \$8200

3rd Place, 2020 Campus Research Day Undergraduate Symposium

April 9th, 2010

Project: *Development and Benchmarking of Optical Touchscreen User Interface Technology*

Award: \$1000

Undergraduate Research Grant

October 2009

Project: *Development and Benchmarking of Optical Touchscreen User Interface Technology*

Award: \$2250

Service

American Society of Mechanical Engineers, Student Chapter

September 2009 – May 2010

Volunteered at E-Week activities, and administered the chapter's website and Facebook page

Skills

Languages: Bash, JavaScript, TypeScript, PowerShell, Python, Scala, Rust, Go

Operating Systems: Ubuntu Linux, Fedora Linux, Raspberry Pi OS, MacOS, Windows

Cloud Platforms: AWS, GCP, Azure, DigitalOcean

Databases: PostgreSQL, MySQL, SQL Server, BigQuery, RedShift, Vertica, SQLite, CouchDB, MongoDB, Redis

Web Engineering: CSS, HTML, Django, Express, Flask, Node.js, Ruby on Rails, React, Electron

Data Engineering & Data Science: Airflow, Spark, Jupyter, LookML, Kafka, Pandas, Data Warehousing, Numerical Methods, Optimization

DevOps: Ansible, Terraform, DataDog, New Relic, OpenTelemetry, Prometheus, Docker, GitLab CI, CircleCI, GitHub Actions, Kubernetes, system, SLOs

Leadership: Consensus Building, Decision Making, Mentorship