**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, 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 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 January 2008 – December 2009

Office Assistant 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 May 2008 – August 2008

Painter Fairbanks, AK

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

UAF Mechanical Engineering Department September 2008 – December 2008

Homework Grader Fairbanks, AK

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

Panco Construction May 2007 – June 2007

Construction Laborer 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 February 2007 – May 2007

Laboratory Assistant 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 May 2006 – August 2006

Porter 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 September 2009 – May 2011

University of Alaska Fairbanks GPA: 3.62

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

Bachelor of Science, Mechanical Engineering August 2005 – May 2010

University of Alaska Fairbanks GPA: 3.67

Minor: Mathematics Cum Laude

High School Diploma May 2010

Susitna Valley Jr/Sr High School

**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

Matanuska BASIC June 2022 - Current

An ongoing projectd 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

**Document Languages:** LaTeX, Markdown, Org, ReStructuredText

**Leadership:** Consensus Building, Decision Making, Mentorship