Sam Havens

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GitHub (Personal) • GitHub (Current Employer) • StackOverflow • LinkedIn

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Software engineer and manager with 7+ years of experience in both hands-on and technical leadership roles.

I'm analytical and have deep experience designing and developing machine-learning-driven applications & services. In technical roles, I am diligent but always focused on the end goal of creating a delightful product. In leadership roles, I am a supportive team leader with experience hiring, training, and motivating staff to tackle challenges and exceed expectations. I am a clear communicator who values learning and teamwork.

Core Competencies:

- Natural Language Processing
- Deep Learning
- DevOps/Site Reliability Engineering
- Remote Work & Management
- Team Growth, Leadership, & Training
- Containers & Microservices

Professional Experience

Writer — Remote

Director of NLP Engineering, 2/2019 - Present

NLP is at the core of what Writer (formerly Qordoba) does, and this role is responsible for that functionality and team. Lead the team writing Python-based NLP microservices in a Kubernetes/PubSub architecture. Also responsible for service deployment and maintenance, as well as growing and leading the NLP team. Work closely with marketing and product to align the NLP roadmap with customer expectations.

Key Achievements:

- Responsible for the core functionality behind all new products/features, including a state-of-the-art Grammar Error Correction model, and models to measure and correct: gender bias, punctuation, and Plain Language using PyTorch, SpaCy, HuggingFace, scikit-learn, Numpy, Tensorflow, FLAIR, and other ML and NLP tools.
- Reduced p95 service latency from >3s to <300ms, with mean time down from 1.4s to 40ms using model distillation and quantization as well as traditional software engineering methods like caching, concurrency, and "rewrite it in C"
- Grew (remote, global) team while improving onboarding effectiveness —time to first commit decreased from weeks to less than one day.
- Train, deploy, and operate models and services using bash scripts, GCP (PubSub, GKE, AI Platform, BigQuery), Kubernetes (kubectl/kubectx/WeaveWorks), nvidia-docker, and Jenkins.

CarLabs — Calabasas, CA & Remote

Chief Technology Officer (CTO), 4/2016 - 1/2019

Ensured seamless technical operations and directed a team of anywhere from 2 to 17 engineers, offering guidance and mentorship toward common goals. Wrote code and assisted with technical sales initiatives while applying machine learning NLP tools including FastText, scikit-learn, and Tensorflow. Developed frontends with React and Redux; created back ends with Node.js, Elixir, and Python. Performed automation with Bash, Jenkins, ElasticBeanstalk, Docker, etc. Cultivated positive and collaborative workforce dedicated to continuous improvement. Led transition to a global, remote workforce.

Key Achievements:

- Promoted to CTO after building prototype that became focus of the company; steered strategic direction and teams while performing hands-on technical tasks.
- Drove team expansion and growth by recruiting, hiring, and mentoring sixteen new staff members, taking team from two to eighteen individuals.

- Established NLP team from current software engineers and led them to increase accuracy of business-critical classification model by >11% within two sprints.
- Generated 25% of 2019 revenue by performing statistical analysis of conversation logs and identifying new product.
- Improved knowledge sharing and expedited issue resolution by implementing technical "lunch and learns" focused on sharing knowledge within the team.

Full Stack Developer, 9/2015 - 4/2016

Improved user experience by creating UIs and APIs for car comparison shopping. Developed web application using React, ES6, Webpack, and MaterialUI. Built an NLP-driven conversational UI using ES6, Hapi, Docker, Python, NLTK, and machine-learning services. Applied HTML/CSS/JavaScript for chat window.

Key Achievements:

- Secured and won contract worth over $1M in revenue by designing, building, and pitching product.
- Doubled ticket velocity by leading transition to modern CI/CD environment with no disruption to operations.

RevMaker — Remote

Software Engineer, 4/2014 - 9/2015

Served as software engineer collaborating with team across stack and performing mathematical modeling to create high-impact software experiences for automotive research and comparison shopping. Used PHP and MySQL to build lead-scrubbing tool used to evaluate likelihood of legitimate contact information.

Key Achievements:

- Created web application using Yii, MySQL, jQuery, and d3.js, enabling users to express preferences and see real-time updates to recommendations.
- Expedited lead scrubbing by >400x through automating process via implementing probabilistic model.

Technical Proficiencies

Machine Learning: Python, PyTorch, Jupyter, scikit-learn, fastai, TensorFlow
Web Development: Flask, Sanic, Node.js, Express, React
SRE: GCP (GKE, PubSub), AWS (Lambda, RDS, Kinesis, Elastic Beanstalk), Docker, Kubernetes, Jenkins, Bash
Programming Languages: Python, JavaScript (previously Elixir & PHP; knowledge of Julia & Ruby)

Education and Credentials

Master of Science in Mathematics | CSUN
Honored with Bianchi Outstanding Graduate Student award for research related to inflationary cosmologies
Named IRIS Fellow in mathematics with Interdisciplinary Research Institute for the Sciences

Bachelor of Arts in Physics | University of California, Santa Barbara
LEAPS Fellow

Service Leadership

Topanga Mountain School -- Topanga, CA

Board Member, 1/2014 - Present

Generated two-fold decrease in staff attrition by planning and implementing staff benefits plan. Increased student application leads by 15% by researching and launching first Facebook advertising campaign. Introduced new technology and led programming club.