

Mike Jacobi

Software Engineer

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SKILLS

Code and Storage

go | docker | python | react | mysql |
redis | elasticsearch | mongodb

Other

agile | ci/cd | testing | oauth2 | aws |
encryption | mentorship

WORK EXPERIENCE

Senior Software Engineer at Linden Research, Inc, Web Infrastructure Team **June 2015- Current**

<https://www.lindenlab.com/>

Linden Lab is a social virtual world company with an extensive USD and virtual economy. This team provides financial capabilities as a multitenant SaaS product.

- Designing, implementing critical web infrastructure - invoicing, payments, auth, accounts, fraud, PII microservices
- Shipping code continuously via CI/CD - small PRs, code reviews, autodeploy, autotests, semantic versioning
- Testing extensively, unit and integration, taking a risk based approach to test exhaustiveness
- Following software engineer best practices - relentless prioritization, deploying frequently, raising blockers, reverifying requirements
- Communicating inside and outside the team - leading technical discussions, close with Product, alerting Support of outages, technical vendor contact
- Watchlist Checker [Go, MySQL, ES, React, SNS/SQS] built frontend and backend to compare user PII to sanction list entities; PII is fed to ES sanction list indexes and scored for similarity; scores above a threshold emit SNS event; SQS consumer generates FreshDesk compliance tickets; frontend allows agents to view score information and submit reviews
- PII Collector [Go, MySQL, SSR] built frontend/backend to check user PII state, and conditionally collect it; users input PII via 3P iframe which verified data; encrypted and stored PII; frontend allows agents to review PII and take account actions (notes, blocking).
- Event Throttler [Go, Redis] wrote a client library on top of Redis to record and throttle application events.

Software Engineer at Linden Research, Inc, Second Life (SL) Payments Team **June 2013- June 2015**

This team maintained a legacy payments code base to support Second Life.

- [Python] Integrated with payments/fraud vendors by implementing REST clients
- [Angular, raw JS] Developed frontends to add credit cards and pay invoices
- Deployed code via building Debian packages, installing them, and working with QA to manually test production

Intern at Los Alamos National Lab - **June 2013**

Worked on various teams on the high performance computing (HPC) storage initiative

- Summer 2011, 2012, Spring 2013 - [FUSE, MongoDB] Built a filesystem search by tagging directories/files in MongoDB and a query CLI to issue searches
- Summer 2010 - [jQuery] Built storage system visualization tool

Intern at Arctic Region Supercomputing Center - **September 2009**

Worked on a team responsible for building climate models

- Summer 2009 - [Python] Built climate data visualization tool
- Summer 2008 - [PHP] Built climate data dashboard

PROJECTS

Online Interior Design Company **December 2018- April 2020**

- Co-founded and incorporated a company to facilitate online kitchen design

- App backend uses Go, runs on Lambda and serverless RDS MySQL, ~50 Lambdas per env
- Frontend is a React app served from an S3 bucket behind Cloudfront
- Auth is implemented using AWS Cognito, makes heavy use of groups, and oauth2/SSO
- Built a CI/CD pipeline from Github Actions that deploys to staging/prod via serverless
- Implemented in-app chat on top of AWS IoT
- Other: Shopify store, hot sauce supply chain, InVision product design, team and equity, branding, lawyer and accountant

LED Project December 2018- December 2018

- [Raspberry Pi] Created a circuit that continuously modifies the colors of RGBW LED bulbs according to light pattern
- [Python] Made web app to change the light pattern

Journal App June 2018- June 2018

- [Go, MySQL, EC2] Used Twilio API to make an app that texts me to journal every day; responding inserts the text message into the database. 500+ journal entries

CI/CD Pipeline Experiment December 2017- December 2017

- [AWS Code Pipeline/Build/Deploy] Built CI/CD system to autodeploy on github master pushes
- Published How To video for this on YouTube with 1,000+ views

Poker App December 2016- December 2016

- [React/Redux, Go] Created a websocket based, multiplayer poker game
- [Selenium, webdriverio] Wrote automated UX tests

Desktop Wallpaper App December 2015- December 2015

- Created a Windows app to cycle desktop backgrounds according to specified query tags
- [Go, Angular] Wrote frontend and API to submit background images and query tag

Pong App December 2014- December 2014

- [React Native] Created Android app to record the points scored in Ping Pong games
- [PyBottle, MongoDB] Made REST API to record games and scores
- [Angular] Wrote webapp to visualize game data with Chart.js

Music Playlist Project December 2013- December 2013

- [Angular, PyBottle, MySQL] Developed web app to create unified playlists with content from YouTube and SoundCloud

Various AWS Projects January 2013- June 2013

- Item Generator [S3, Dynamo] Experimented with javascript CRUD web app
- Process Resource Throttler [EC2, Python] Made an app and CherryPy server on EC2 to set process resource limits

Educational First Person Shooter June 2011- June 2011

- [C#, XNA] Made FPS with power ups based on knowledge demonstrated; wrote knowledge system, object behavior, collision detection, power-up system; group project

EDUCATION

Master of Science Computer Science at University of New Mexico
2011 - 2012

Bachelor of Science Computer Science at University of Montana
2007 - 2011