

Professional Skills

Engineering Leadership

- Team mentorship with a focus on growth mindset to achieve career goals
- Team building – Candidate selection, recruiting, interviewing and integration
- Translation of business requirements into clear technical requirements
- Understanding of business value and how process and technology contribute to it
- Expert in implementing Agile and Scrum in technical teams

Software Engineering

- Software Polyglot (Python, Ruby, Javascript, Java, C, C++, Lua, etc.)
- Expert in design and architecture of APIs and microservices
- Expert in designing and implementing full-stack web applications
- Experienced in breaking down large systems into manageable tasks

Quality and Automation

- Automated quality assurance – unit testing, functional testing, E2E testing
- Deployment and process automation using DevOps principles
- Experienced with Docker, Terraform, Ansible, and major cloud providers (AWS, Azure)

Experience

Staff Engineer – Ada

Jan 2022 – Feb 2023

- Evaluated multiple API gateway products for organizational suitability
- Worked with Architecture team to define API gateway plan
- Research and proof of concept of organisation-level API gateway
- Deployed custom EKS cluster infrastructure through Terraform for prototyping purposes
- Recommended and implemented numerous technical hiring pipeline improvements
- Revamped existing backend technical evaluation to improve candidate experience and automate updates
- Provided technical leadership for Python backend and team guidance for refactoring and automated testing
- Provided non-technical leadership through implementing best-practices and recommendations for Agile processes
- Led initiatives to understand team performance and DevX through Github and Faros
- Provided technical mentorship through individual sessions as well as group learning events
- Design and architecture of new highly-scalable Go microservice to integrate with agent platforms

Tech: Python, React, NodeJS, Go, Terraform, EKS, AWS, Faros

Lead Engineer (Volunteer) – Lunum Inc.

Jun 2022 – Oct 2022

- Fixed existing pandas pipeline ETL implementation and automated pulling external data from APIs
- Refactored pipeline from pure jupyter notebook implementation to separate UI and computation library
- Defined and setup AWS infrastructure for multiple environments with AWS EC2, S3, RDS
- Led technical strategy for MVP implementation, defining features and areas of work focus
- Improved speed of pipeline iteration by automating local environment with Docker and PostgreSQL
- Automated data pipeline usability from days to process single dataset to hours to process multiple larger datasets

Tech: Python, pandas, AWS, PostgreSQL, Docker, jupyter

Senior Engineer – Red Thread Innovations

Feb 2021 – Jan 2022

- Led shutdown of legacy Wordpress systems in various PaaS platforms
- Led cost management of client systems in Azure leading to 70% cloud savings
- Mentored new DevOps hire on Azure infrastructure, AWS infrastructure, Terraform, Azure ARM templates
- Strategically supported the business as a team augment for a client
- Designed and implemented new API features across several Java/Spring and Python microservices
- Major contributor to a new microservice in built with fastapi
- Significantly improved code coverage (to 80%) in fastapi microservice

Tech: Java/Spring, Python/fastapi, Azure, AWS, Terraform

Senior Engineer – FileWave

Jun 2020 – Feb 2021

- Improved quality of Android implementation by adding dependency injection and fixing unreliable tests
- Implemented new administrative functions across C++ administrative frontend, Android client and Django backend
- Led feature implementation for authenticating Windows 10 OOB Experience through OAuth
- Contributed to identification and fixing of dozens of inconsistent Django and Qt unit tests

Tech: Java/Android, Python/Django, C++/Qt

Senior Engineer/Architect – Red Thread Innovations

May 2019 – Jun 2020

- Architecture of a new PaaS serverless product
- Supported in technical strategy and definition of a technical roadmap
- Validation of architecture plans, infrastructure setup and technology choices
- Led full-stack integration of a new identity product with existing SSO system

Tech: NodeJS, React, Azure ADB2C, Kubernetes, Terraform

Director, Platform Engineering – WE Charity

Feb 2017 – May 2019

- Built and led a team of engineers in designing and developing a platform of REST APIs
- Guided multiple Agile teams as engineering lead or product owner
- Defined new SOPs for engineering deployment with a new DevOps team
- Spearheaded infrastructure consolidation and migration to Azure and Docker
- Led cost-saving initiative by switching to Cloudflare geocaching for main website
- Worked with internal and external partners to develop a loyalty program
- Delivered an MVP of a loyalty program to production
- Defined a new engineering hiring process

Tech: Python/Pyramid, React, Azure, Docker, Docker Swarm, Cloudflare

Tech Lead – Kinetic Cafe

Oct 2015 – Feb 2017

- Lead a team of 2-5 engineers in building and designing a social network backend API
- Responsible for communicating team delivery and estimations to all stakeholders
- Implemented zero-downtime migrations to lower risk of deploying new code
- Maintain engineering quality while delivering on deadlines
- Mentoring inter- and intra-team engineers to achieve career goals and growth
- Initiated a cross-functional bi-weekly collaboration session for all leads

Tech: Ruby, Rails, Heroku, Talend

Platform Engineer – Kinetic Cafe

Dec 2014 – Oct 2015

- Designed and implemented an authentication microservice and middleware to enable SOA
- Design an e-commerce cart and ordering system backend
- Created a JMeter integration test suite for regression and performance testing
- Implemented an API layer over Solr providing extra metadata

Tech: Ruby, Rails, Lua, nginx, Solr, JMeter, Hybris

Director of Technology (Volunteer) – Board and Tale Games

Oct 2015 – Oct 2016

- Provide insight and advice in all technology related matters
- Assisted in design and creation of website
- Begun creation of a new product to aide in community creation and retention
- Optimized Facebook Open Graph metadata

Tech: Drupal, PHP, HTML, CSS, JavaScript, Linode

Software Team Mentor (Volunteer) – FIRST team 4902

Jan 2015 – Apr 2015

- Volunteer mentor for FIRST Robotics team 4902
- Helped high school students identify and solve software-based robotics problems
- Assisted in electrical and mechanical problem-solving with students

Tech: Java, Electronics, Robotics

DevOps Developer – Top Hat

May 2014 – Nov 2014

- Unified development and testing environment provisioned with ansible and vagrant
- Work on an authentication microservice to handle all site authentication
- Load testing and performance vulnerability analysis with JMeter

Tech: Ansible, Vagrant, Virtualbox, JMeter, Django

Android Developer – Top Hat

Oct 2013 – May 2014

- Lead developer in creating a native Android app for Top Hat
- Complete functionality replacing mobile website with vast UX improvements
- Included real-time aspect with websockets delivering content to users
- Worked with an intern and second developer to deliver initial project in 14 weeks

Tech: Java, Android, Websockets

Software Developer – Top Hat

Jun 2012 – Oct 2013

- Worked with Django and TastyPie to create first-class REST APIs
- Architect a new billing API to handle all payments and purchases
- Payment integration with Braintree and PayPal payment services
- Site integration with Blackboard Learn LMS system through SOAP
- Create new API and frontend to track student attendance
- Worked with an co-op developer to complete attendance project
- Architect new SMS logging feature to assist account manager team

Tech: Python, Django, PayPal, Braintree, celery, SOAP, twilio

Web Developer – Stitch It Canada

Aug 2011 – May 2012

- Created sub-site to facilitate creation and delivery of French language content
- Designed and built custom forms and surveys to aggregate clientele data
- Modified existing web framework to improve client usability and feature set

Tech: PHP, Drupal

Computer Service Technician – Nigel Computers

Jan 2010 – Aug 2011

- Communicated with clientele to ensure quality of service
- Excellent time management and prioritization skills to complete tasks

Tech: Windows, Hardware, networking

Lead Programmer (Student) – FIRST Robotics Team 2386

Sep 2007 – May 2008

- Teamwork in a highly competitive and time-constrained environment
- Developed and debugged software during competition
- Won top rookie seed at 2008 FIRST Chicago competition, made semi-finals

Tech: C/C++, Robotics

Intern System Administrator – Area 50 Inc.

Feb 2007 – Jun 2007

- Deployed new servers into a production environment
- Developed flexible software to automate system administration tasks

Tech: Python, bash, Linux, FreeBSD, networking

Personal Projects

photo_grapher

- Self-hosted photo-hosting app, mapping photos to the locations they were taken
- Backend API built with Django using GraphQL
- UI built in React with TypeScript

Tech: Python/Django, TypeScript/React, GraphQL, EXIF, Leaflet

Epitronical Infra

- Deployed self-hosted Docker Swarm infrastructure for hosting personal projects
- Traefik used for service-based routing
- Private GitLab instance set up with CI for automation

Tech: Ansible, Docker Swarm, Gitlab, Traefik, OVH

Personal Website

- Personal website statically generated with Jekyll
- PDFs auto-generated with Puppeteer JS

Tech: Jekyll, Liquid, Ruby, Puppeteer

Go CRM Backend

- Backend API for a small CRM project written in Go
- Written with TDD methodologies
- 97% unit test coverage

Tech: Go, TDD

Arduino Racetrack

- Arduino-controlled electronic pinewood derby track
- Hardware (soldering, custom electronics) and software
- Use C to control IR LEDs and sensors through the Arduino platform
- Python and pygame (SDL) application to show race results
- Modular board and component design for reusability and simplicity
- Used in derby tournament for accurate and visual reporting of race winners

Tech: Python, C, Arduino, SDL, circuit design

Isometris

- Tetris-like game rendered in isometric 3D

Tech: Javascript, ThreeJS

YALS2

- Cellular Automata simulator (Conway's Life)
- Written in C with SDL and OpenGL
- New algorithm, orders of magnitude faster than previous implementation
- Rendered with OpenGL 3.1 GLSL shaders for efficient rendering

Tech: C, OpenGL, SDL2

Nginx Embedded Ruby

- Contributed two feature additions to ngx_mrubby, allowing header manipulation in mrubby

Tech: C, Ruby, nginx

Simple Kernel

- Use x86 assembly and C to create a simple bootloader kernel

Tech: C, x86 assembly

Site in a Box

- Run a full site on an embedded Linux system (ARM)
- Provided wifi from device to access site
- Included web app, database, message queue, DHCP server

Tech: Python, nginx, ansible

Dev VM

- Everything-included development environment packaged in a Virtualbox VM
- Precursor to devops project at Top Hat

Tech: Vagrant

Interrupt-o-meter

- Flask microsite to pull data from Pivotal Tracker tool API

Tech: Python, Flask

YALS

- Conway's Game of Life simulator written in C++ with SDL

Tech: C++, SDL

Education

Sheridan College

- Software Development and Network Engineering

Sep 2011 – May 2012