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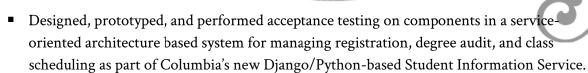
Professional History

Tackle.io ~ Boise, Idaho
Staff Software Engineer ~ September 2021 to June 2023

- Technical lead for internal platform engineering team, charged with improving consistency, security, observability, and operability across Tackle – a Series-C startup funded by a16z, Bessemer, and Coatue
  - In close partnership with CloudOps/SRE, launched the platform engineering practice over the existing amalgam of Lambda and ECS services into a normalized Kubernetes-governed cohesive platform, focusing on Python (Flask/FastAPI), Golang, and Typescript.
  - Designed and led the implementation and adoption of the Tackle Auth Service, a centralized authentication and policy enforcement solution to normalize security controls across ingress and service-to-service connections, using polyglot client libraries.
  - Designed and led the implementation of RBAC across services on the Tackle platform.
  - Designed and led the implementation of a developer friendly security event logging pipeline, supporting both internal SIEM systems and customer-managed external SIEM systems, using polyglot client libraries.
  - Designed and led the implementation of structured logging practices and standards across the Tackle platform, including developing the open source structured logging toolkit.
  - Designed and implemented a customer cloud credential vault and proxy service, centralizing storage and management of customer client credentials and empowering services to execute AWS API calls using customer credentials without having direct access to them.
  - Provided leadership and guidance in upleveling general developer practices at Tackle, including leading quarterly Hackathons; holding lunch-and-learn sessions around topics such as OSS licensing, OWASP Top 10, and Kubernetes; standardization of repository structure and code quality tooling; leading a bi-weekly roundtable of tech leads.

FlowTheory Networks, LLC ~ Asheville, North Carolina
Founder ~ October 2020 to August 2021

- Founded and operated contract software architecture and engineering consultancy, offering scalable web systems engineering using Python & Django
- Client engagements included:
  - Consulting Architect to Columbia University in New York City

- Designed, prototyped, and performed acceptance testing on components in a service-oriented architecture based system for managing registration, degree audit, and class scheduling as part of Columbia's new Django/Python-based Student Information Service.
- Designed, prototyped, and performed acceptance testing on integration interfaces and data streams between the legacy mainframe SIS and the new SIS, supporting a phased transition between the generations of systems.
- Proposed, obtained consensus, and drove the implementation of industry best practices within the Columbia SIS project, including developer environment standardization, professional standards for code review and acceptance, and modern git-flow branch management.
  - Architect and Lead Engineer to SeekHealing in Asheville, North Carolina
    - Designed and implemented Django/Python-based custom program management database for social health non-profit, including participant data tracking and metrics, donor relations management, and community communications and engagement tools.
    - Designed and implemented call center management for voice and SMS warm line through Twilio, supporting all volunteer interactions over SMS, 3-way calling for support escalation, and metrics & reporting.

Red Hat ~ Raleigh, North Carolina
Senior Principal Software Engineer ~ April 2019 to October 2020
Principal Software Engineer ~ November 2015 to April 2019

- As the architect for cloud.redhat.com, lead the technical design and execution of the Red Hat Cloud Services Platform: a common set of services, data state, and standards on which teams in Red Hat Management, Red Hat Enterprise Linux, and Red Hat OpenShift could build hosted, managed applications to increase the value of RHEL and Smart Management subscriptions, with almost 1 million managed nodes as of Autumn 2020.
  - Designed and oversaw internal standards development process to create uniform approach to service oriented architecture, customer facing REST APIs, and cloud native development
  - Mediated and led the collaboration on all cross-platform design and development execution between historically siloed teams within the Management business unit
  - Founded the Management business unit's internal architecture council, to align best practices of design across our teams; and the cloud.redhat.com Tech Talk series, to highlight and evangelize the platform's services among application team stakeholders
  - Served as performance and scale consultant to service teams on the platform, such as improving average service time on the RBAC policy service by 93% from 250ms to 18ms
  - Served as the design architect on the Ansible Automation Catalog and the Find-It-Fix-It cloud based remediations service

- ○ Researched and wrote Red Hat's technical due diligence on the CoreOS acquisition
- ○ Co-designed and implemented Receptor: a Python-based multi-service worker mesh (Patent #US11368525B2)
- ○ Designed and implemented Turnpike: a highly-customizable pipeline based API gateway based on Flask and nginx
- ○ Designed and implemented Aletheia: a documentation aggregator & normalizer to compile disparate sources of documentation from various GitHub repositories and Google Docs into one uniform Hugo-based documentation site
- As the architect for Ansible Tower, lead the technical design and scaling efforts of the Python/Django-based Ansible Tower product, working with engineering leads to evolve Tower from a single node to a clustered execution model, allowing Tower deployments managing hundreds of thousands of nodes, as Ansible grew to a $100m SYB unit of Red Hat
  - ○ Based on requirements gathering from product, engineering, and customers, led the refactoring of the Tower architecture to a clustered model with remote execution nodes, using RabbitMQ for consensus management, eliminating Redis and MongoDB from the architecture
  - ○ Designed and overhauled Ansible Tower's system tracking feature, allowing customers to quickly identify when discovered facts on managed systems had changed
  - ○ Designed, implemented, and evangelized Ansible Container, a complete container workflow tool that could build containers from Ansible playbooks, execute them locally, and deploy them to a remote Kubernetes instance
  - ○ Co-designed Ansible Runner, a modularized Ansible execution environment for more reliable automation
- Served on Red Hat's Diversity + Inclusion Advisory Council

Celerity ~ McLean, Virginia
Python Practice Lead and Principal Engineer ~ October 2013 to November 2015

- Managed Python practice within Digital Experience solutions consulting group, including professional development of 8 Python engineers; internal culture and team building; interviewing, recruiting, and public-facing thought-leadership; conference talks
- Designed and implemented a CMS software and systems platform to accelerate and standardize developer and production environment generation, to leverage past CMS work into future CMS projects, and to reliably pipeline CMS projects from design through front-end engineering to back- end engineering
- Supported sales, account, and engagement managers as technical authority during sales and account management meetings

SocialCode ~ Washington, District of Columbia
Chief Architect ~ August 2012 to October 2013
Founding Engineer ~ July 2011 to August 2012

- Scoped, designed, lead the implementation of, deployed, scaled, and supported AdVisor, a Django/Python Facebook advertising management and reporting platform, executing hundreds of millions of dollars of advertising spend per year
- As Chief Architect, after a talent acquisition of digg.com doubled the engineering team size, redesigned monolithic AdVisor product into a service-oriented architecture, to allow additional products to be developed leveraging the services already in place
- As Chief Architect, re-architected, reviewed, and scaled an R&D prototype real-time, Facebook page post performance analytics tool into the production grade MessageOptics product, winner of a Facebook Preferred Marketing Developer Program Innovation Award

FlowTheory Networks, LLC ~ Arlington, Virginia
Founder~ August 2008 to February 2011

- Founded technology contracting and sub-contracting firm, offering web application development; network engineering; managed hosting solutions; and workflow automation

The Hive, dba Singlesnet.com ~ Needham, Massachusetts
Senior Systems Administrator ~ September 2008 to November 2009

- Executed a zero-downtime migration of 18-rack datacenter presence dating website family with 750,000 users per day

Free Software Foundation & the GNU Project ~ Boston, Massachusetts
Senior Systems Administrator ~ September 2005 to September 2008

- Served in a triumvirate of systems administrators to provide software development, systems administration, technology strategic planning, and technical support to the Foundation, its campaigns, Richard Stallman, and the GNU Project

Brainstorm Internet ~ Durango, Colorado
Systems Administrator ~ October 2003 to August 2005

- Planned, configured, and supported ISP LAN and WAN services on GNU/Linux and FreeBSD server platforms, Cisco network infrastructure, and Lucent/CopperEdge DSL network

Speaking Engagements

- TEDx Asheville 2018 ~ Asheville, North Carolina: "The Emotionally Eviscerated Man", discussing the emotional growth journies of men in modern culture
- Red Hat Summit 2018 ~ San Francisco, California: "Culture-as-a-Service: Managing Teams Building Microservices", discussing the role of management in creating culture on engineering teams
- Four AnsibleFest, eight Ansible Automates, and two DevConf.cz engagements for Red Hat from 2015 to 2017
- DCPython 2015 ~ Washington, District of Columbia: "All Things Caching"
- Django District 2015 ~ Washington, District of Columbia: "Scaling, Optimization, and Fault-Tolerant Design with Django"
- DC CTO School 2014 ~ Arlington, Virginia: Panelist on the "Stack of Stacks" panel, discussing preferred technology platforms for reliable and scalable solutions
- DjangoCon 2014 ~ Portland, Oregon: "A Nice Problem to Have: Running Django under Heavy Load"
- DjangoCon 2012 ~ Arlington, Virginia: "Using Redis with Django"
- DjangoCon 2011 ~ Portland, Oregon: "Using Google Protobuf with Redis" (lightning talk)
- DjangoCon 2008 ~ Mountain View, California: Panelist on the "Django Success Stories" panel, discussing the adoption of Django at the FSF
- The Last HOPE 2008 ~ New York, New York: "The Zen of the Hacker"

Philanthropy

SeekHealing ~ Asheville, North Carolina
Co-Founder & Treasurer ~ October 2017 to present

- Co-founded and served on the board of a social health non-profit, created to minimize deaths of despair (including opioid overdose deaths) through the medicine of authentic social connection

Formal Education

Rice University ~ Houston, Texas
Bachelor of Arts ~ Conferred May 2002

- Honored with the Sallyport Award for service to the University and a Wiess College Award for service to Wiess Residential College