Proficiences

Software Development

I have a wide variety of experiences with software development.

- Recent Languages
 - C, Python
- Recent Frameworks
 - Django, Celery, wxPython
- Other Architectures
 - \circ hardware and firmware development for MSP430 and STM32 architectures.
 - Nvidia CUDA (non-AI related development)
 - Lattice ECP5 FGPAs

Infrastructure and Networking

I have extensive experience with Systems Administration and Infrastructure. Proficiencies include:

- Wide variety of Database experience (SQL, NoSQL, Time Series)
- Virtualization, Containerization, and Orchestration (Kubernetes, KVM, Docker, etc.)
- Network Infrastructure and Troubleshooting

About Me

My strongest skill set is Python Backend work especially with Django. I have a lot of Infrastructure experience as well with notable focus on Kubernetes and AWS. Frontend is my weakness, and while I can pull off small changes it's probably best for everyone that I don't attempt anything significant.

My ideal role would be part mentoring, part leadership, and part individual contributor. While I'm growing into the former two, I'm not yet wanting to give up the latter.

I'm a self-starter, can work completely independently as appropriate, and take initiative in resolving blockers.

I put deliberate thought into asynchronous communication – with long response latency common on global teams, I'm mindful of ensuring I'm including all relevant details in each message.

Strong focus on security and privacy.

Work History

Self-Employed (April 2023 – Current)

Hardware and software engineering on a contract basis and developing my own products. Major examples include:

- Repair and Mitigation of lightning damage to Telecom equipment.
- IOT data collection supporting customers in the agriculture industry.
- Developing Pricing Models and Trading / Reporting infrastructure for an unlaunched Hedge Fund

Cognitive Space (Jun 2022 - Mar 2023) Sr. Software Engineer - Backend

Part of the backend team for Satellite Operations Planning and Scheduling. Mainly using Python/Django, built and consumed APIs between the Frontend and Data Science teams, as well as managing storage for user generated and computed data. Extensive use of Kubernetes for local development and deployment of services.

NoBadDays Kayak (2019 - 2022) Founder / Owner

A retail kayak and accessories store, I mostly did back-office work (accounting / website). I built and ran our store backend based on Django/Celery that manages automation and syncing inventory and orders between the website, in-store POS, and accounting systems.

Zenoss (August 2015 – December 2017, July 2018 - August 2021) Sr. Software Engineer / Client Services

Custom development of "ZenPacks" to extend the Zenoss network monitoring products for client customization. Extensive use of SNMP for network monitoring as well as various APIs to collect data from devices (e.g., REST APIs, database queries, remote SSH commands). Focus on performance, scalability, and asynchronous processing.

In addition to development, this role involved extensive communication with our clients to collect requirements, support the deployment, and provide ongoing maintenance and troubleshooting of solutions.

ARLO Project (2010-2020) Developer / Maintainer

http://www.arloproject.com/

The ARLO Project was an open source framework providing analysis of large media collections for academic researchers. I started out as a full-stack engineer for the web interface, eventually being the lead developer for the entire project. I also mentored and reviewed contributions from other members of the team, including CS students and non-CS background contributors. In addition to development, I managed the computing resources that powered the project (notably interfacing with TACC's Stampede supercomputer).

Along with a team of researchers from the Illinois Natural History Survey and the National Center for

Supercomputing Applications, the ARLO software was developed using machine learning to identify and classify bird calls and perform 3-D location analysis. This was expanded to include additional forms of media, including voice and image analysis, for example applied to poetry readings and radio broadcast recordings for analysis of large libraries of data within the Digital Humanities fields.

InvisionApp.com (January 2018 – April 2018) Sr. Site Reliability Engineer

Deployment and monitoring of microservices in a Saas stack built on Docker, Kubernetes, and AWS.

DigitalOcean.com (November 2013 – August 2015) Linux Systems Administrator / Tier2 (TechOps)

Provided customer support and investigated infrastructure issues for unmanaged Linux / Unix virtualized servers within DigitalOcean's public cloud. Customer support activities include advising customers on technical problems, investigating issues within our internal infrastructure or hypervisors, and identifying and resolving abuse issues. I handled both individual escalations and large scale incident management within the infrastructure, investigating, resolving, or escalating to Engineering if necessary.

Rackspace (December 2011 – November 2013) Linux Systems Administrator / Managed Cloud

Provided customer support for Rackspace's Managed Cloud team. In addition to supporting Cloud Infrastructure, I also provide direct support to customer's servers, namely the LAMP stack. Tasks include configuring initial build-out, from configuring Vhosts on an individual server to building out a large cluster with multiple web-heads and DB servers. Further work included system software installation, mitigating downed sites or servers, and discussing architectures with customers during their initial design phase.

Hostgator.com (March 2011 – December 2011) Linux Systems Administrator

Provided direct support for shared, VPS, and dedicated server hosting customers, most of whom utilized cPanel/WHM or Plesk control panels. Most of my work was done through a ticket based support system, but also provided spill-over coverage for chat and phone support and a special queue dedicated to working 1-on-1 with customers on escalated long running issues.

Wildlife Tracking

Prior to switching to Linux SysAdmin work, I had an extensive career working with Wildlife Tracking technologies. I designed, built, and helped implement various tracking systems, both from a technological and biological perspective. An account of this experience is available on my website, at http://hiretonyb.com/experience.html

Publication Credits

- Radzio, T, J. Hackler, D. Delaney, M. Hinderliter, T. Borries, J. Smolinsky, N. VandenBroek, and A. Walde. 2007. Use of an automated telemetry, video, body temperature, and light intensity data to determine gopher tortoise activity, behavior, and disturbance response patterns. 5th Annual Symposium on Conservation and Biology of Freshwater Turtles and Tortoises. Atlanta, GA. Poster Presentation.

- Clement, T., Tcheng, D., Auvil, L., and Borries, T. "Introducing High Performance Sound Technologies for Access and Scholarship." The International Association of Sound and Audiovisual Archives Journal (September 2013) 41: 21-28.

- Clement, T., Tcheng, D., Auvil, L., and Borries, T. "High Performance Sound Technologies for Access and Scholarship (HiPSTAS) in the Digital Humanities" Proceedings of the 77th Annual ASIST Conference, Seattle, WA, 31 October – 5 November, 2014.