

David Bern

davidbern.com

Software Engineer

Northwest Indiana

Experience

Live Building Systems

Software Engineer

- Integrated REST APIs of third-party devices by using clusters of multithreaded **Celery** workers in **Python**, enabling the company to reduce equipment costs by supporting more lightweight devices
- Deployed new reports to increase analyst productivity, accomplished by creating React components and connecting them to new **Flask** endpoints powered by **SQLAlchemy**
- Virtualized the web stack with **Docker** and automated deployment with **CircleCI**, making releases easier, faster, and containerized.
- Shifted services from EC2 over to a serverless infrastructure on **ECS Fargate**, eliminating server maintenance and supporting scaled deployments.
- Converted to Infrastructure as Code using **Terraform** to manage provisioning of both staging and production, simplifying management, unifying deployments, and enabling international deployment.

Projects

Wikipedia Watchlist *JavaScript, jQuery, HTML*

125 users, 4.5/5 stars with 23 reviews

Google Chrome extension that checks your watchlist on Wikipedia and updates the browser icon when new changes are found. Clicking the icon shows a summarized view of the changes and links to them. Options page allows you to configure the language and update interval.

tiger-hash-python *Python*

Completed the first pure Python implementation of the Tiger Hash function, building on the initial work of Brian Browning.

Comic Viewer *Python, C++*

Windows application for reading comics. Reads compressed files and caches images in memory to increase responsiveness. Written in Python using Pygame, and includes a Windows Explorer plugin for thumbnail generation written in C++.

Skills

Web Backend: Python, Flask, SQL, Celery

Web Frontend: React, JavaScript, jQuery, and CSS

DevOps: AWS including ECS, Fargate, EC2, RDS, ElastiCache, and Load Balancers
Terraform, CircleCI, and Docker for CI/CD

SDLC: Agile, Scrum, Kanban, and Test-driven Development; Git, Jira, and Github

Certs: HashiCorp Terraform Associate, Microsoft Certified DP-900 Azure Data Fundamentals

Education

Illinois Institute of Technology

Chicago, IL

Bachelor of Science in Biomedical Engineering

Achievements

- Deans List for five semesters
- Phi Theta Kappa, Honor Society, member