

Avery Uslander

Software Development Engineer

Salt Lake City, Utah uslander.avery@gmail.com github.com/TechnoConserve

Software engineer and systems administrator at Red Butte Garden in Salt Lake City. Builds Python and Django applications, runs the infrastructure behind them, and spends the rest of the time pointing cameras at birds.

Experience

Software Development Engineer III

Nov 2025 – Present

Red Butte Garden, Salt Lake City, UT

- Architects, develops, and maintains scalable web applications and enterprise software solutions to streamline organizational operations.
- Engineers robust cloud infrastructure and backend API services using Python, Django, AWS, and modern containerized workflows.
- Retained all core duties and system administration responsibilities from the previous role.

Systems Administrator

Feb 2020 – Nov 2025

Red Butte Garden, Salt Lake City, UT

- Managed and deployed security patches, software, custom scripts, and licenses across 140+ client endpoints (macOS, Windows, and mobile devices) using FileWave MDM.
- Maintained high availability, access control, and automated backups for Microsoft SQL, PostgreSQL, and MySQL databases serving key application backends.
- Developed core features for the main company website and internal intranet using Python, Django, Wagtail, and Git.
- Orchestrated serverless and containerized web application deployments utilizing Zappa, AWS Lambda, AWS S3, AWS RDS, Nginx, Docker, and Docker Compose.
- Delivered comprehensive technical support, policy guidance, system troubleshooting, and extensive technical documentation across organizational services.

Code: company website <https://github.com/redbuttegarden/redbuttegarden-django>, intranet

<https://github.com/redbuttegarden/intranet>

Research Assistant

Feb 2015 – Feb 2020

Red Butte Garden, Salt Lake City, UT

- Automated data collection on seed mix composition and availability across the Department of Wildlife Resources website using Selenium WebDriver and Requests.
- Parsed, analyzed, and aggregated complex datasets across numerous Excel workbooks into comprehensive analytical reports using Python.
- Designed and deployed a web application to intelligently schedule seed collection times from historical weather trends and alert users to anomalous forecasts based on GPS coordinates.

Botany Specialist

Jan 2017 – Jul 2017

Great Basin Institute & BLM, Salt Lake City, UT

- Prototyped and documented a regional seed database for the Colorado Plateau Native Plant Program using MySQL, SQLAlchemy, and Flask.

Drupal Development

Oct 2015 – Sep 2016

Natural History Museum of Utah, Salt Lake City, UT

- Engineered a native plant database in Drupal detailing plant species of cultural significance to Native American tribes in the Northwestern Great Basin.

Education

The Colorado College

May 2012

Bachelor of Arts, Biology, Colorado Springs, CO

Coursework: Computer Science I & II; Intro to Java and Advanced Java Programming.

Udacity

Jan 2018

Grow with Google Challenge Scholarship, Front-End Developer (Phase I & II), Online

Certificates

Introduction to Git & GitHub

Coursera

<https://www.coursera.org/account/accomplishments/certificate/3RMK6U6SFKP3>

Using Python to Interact with the Operating System

Coursera

<https://www.coursera.org/account/accomplishments/certificate/4972BGBRSJ7F>

Machine Learning: Regression

Coursera

<https://www.coursera.org/account/accomplishments/certificate/YSXNTP2GGQ3P>

Machine Learning Foundations: A Case Study Approach

Coursera

<https://www.coursera.org/account/accomplishments/certificate/RTLUGVUFRX66>

Crash Course on Python

Coursera

<https://www.coursera.org/account/accomplishments/certificate/3MM3BU2T8CBW>

Skills

Operating Systems

Windows, macOS, Ubuntu, Arch Linux, CentOS 7

Automation & Scripting

Python, Bash, JavaScript

Hardware & Embedded Systems

Raspberry Pi, remote data logging, sensor integration, automation

Version Control & CI/CD

Git, GitHub, GitHub Actions

Cloud Infrastructure

AWS, DigitalOcean, Ubuntu VPS, Docker, Docker Compose, Nginx, Caddy

Full-Stack Web Development

Django, GeoDjango, Wagtail, Flask, FastAPI, Astro, PostGIS, PostgreSQL, MySQL, SQLite

Projects

BirdTracker

averyuslaner.com

Backyard bird-feeder monitoring: a Raspberry Pi camera feeding Frigate, a custom EfficientNet species classifier with an auto-training loop, InfluxDB/Prometheus metrics, a labeling web app, and a Wear OS companion. Private repository; its public face is the dashboard on this site.

Python, ONNX, PyTorch, MQTT, InfluxDB, Prometheus, Docker, Android

PlantAssetIndex

plantassetindex.com

Django 5 application with an ITIS-based taxonomy browser, Celery workers, Redis caching and a GitHub Actions deploy pipeline on a 1 GB droplet.

Django, PostgreSQL, Redis, Celery, GitHub Actions

averyuslaner.com

github.com

This site: a static Astro front end, a signed-ingest FastAPI metrics service, and a privacy-first data contract that publishes bird activity without images or identifiers.

Astro, TypeScript, FastAPI, SQLite, Caddy, Cloudflare