

Jacob Quinn Sanders

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SKILLS

Python / JavaScript / PHP / HTML / CSS

web and document scraping / data acquisition, validation, cleaning and analysis /

Selenium / regex / QA / documentation / Django / Flask

PROFILE

The consistent thread in my career is storytelling. As a software engineer, I use technology to guide, to educate, to illustrate, to highlight. With my background in journalism, I'm familiar with so many of the ways users and real-world information can be complex and imperfect -- the ways in which they're bad at telling their own stories. I love learning as much as I love sharing. So I volunteer to teach new coders. Or I lead sessions about topics such as the ethics of web scraping. I started somewhere, too. And it won't be long until these same people are teaching me.

CODING EXPERIENCE

Intermedix, Pittsburgh, Pa., 2016-present. Software engineer.

The Pittsburgh office of Intermedix was founded as Collaborative Fusion in 2002 and acquired in 2011. Its primary product is a web-based tool for state-level emergency-management agencies to coordinate disaster responses.

- Refactored file validation and handling in PHP to produce new auditable reports while processing batch files into a PostgreSQL database within a large, mature codebase
- Built out login and user-validation functionality in a new feature while learning elements of the SimpleSAML framework on the fly, integrating it with a custom PHP framework and also implementing new JavaScript and CSS
- Led team effort to design a new process for onboarding
- Served as part of a team testing compatibility for a major software upgrade
- Regularly reviewed and tested other engineers' code changes
- Handled maintenance and new features in the service of a version-controlled, object-oriented codebase for a product which provides secure messaging and background-check capabilities, among other features, for emergency-management agencies
- Contributed to UI and UX as well as backend databases, and everything in between, using Agile development methodologies

War Streets Media, Pittsburgh, Pa., 2015-present. Co-founder, developer.

War Streets Media is an incorporated startup in development focusing on data journalism and tools as well as information design.

- Built the responsive website **Boozicorns** in Python/Django and JavaScript, making searchable and mapping in Leaflet the rarest bottles available in Pennsylvania on any given day. Deployed on remote Linux/Ubuntu server running Apache and mod_wsgi with Varnish caching. Regular users include local bartenders and people in search of holiday gifts. It **interested media as well**
- Scraped state-level data on direct-shippers of wine to further clean it and enhance it with third-party geolocation API integration to build **Grape Aphid**, mapping and sharing the data and data analysis publicly as a responsive Python/Flask web app with a flat-file JSON backend. Hosted on a remote Linux/Ubuntu server running Apache and Gunicorn
- Engineered and refactored a multithreaded web scraper and a PDF parser in Python to crawl, acquire and clean the Pennsylvania Liquor Control Board's retail database daily. Reduced runtime 85 percent from first working version. Storage in PostgreSQL and AWS S3. Automated on Linux server with crontab and Bash script
- With no APIs available, built and automated web scrapers across multiple government sites in Python using lxml and Selenium, targeting, cleaning and storing data related to campaign finance.
- Helped develop data-acquisition, pricing and product strategies

Freelance web developer and information curator, Pittsburgh, Pa., 2015.

- Worked most often as a subcontractor, writing a crawler in Python to collect all of a small church's web-based PDF forms and document their locations, contributing custom JavaScript and CSS to WordPress projects, and researching and documenting competitors' not-always-public efforts within a business space

JOURNALISM EXPERIENCE

- Award-winning reporter and editor at news organizations large and small covering law enforcement, local government, food and drink, and natural gas in **Pennsylvania, Arkansas, Oregon and California.**
- Document sleuth
- Adept at finding good stories no one else was telling, independently or as part of a team
- Breaking-news editor at the Pittsburgh Post-Gazette beginning in 2011, reimagining the job from the ground up, then the PG's first audience-engagement editor in 2014
- Collaborated across departments with newsroom editors, IT, marketing and sales
- Also served as an adjunct instructor for journalism at Carlow University

Skills that reach beyond journalism: Meeting real-time and long-term deadlines, validating information, designing workflows, QA testing, social media, interviewing, writing and editing, content strategy, incorporating user data and analytics into everyday work, coordinating people and resources for real-time performance

EDUCATION

University of Nevada, Reno. 1996-2000. Reynolds School of Journalism.

- Chosen by faculty as the top student in the print sequence, 2000.

Coding Campus, Provo, Utah, 2015. Junior Python developer.

Now called V School, this was an intensive three-month code academy. My track focused on Python and Django.

- Built and deployed **Arthur**, an effort in storytelling through technology. A Python/Django website featuring interactive visualizations of my grandfather's work in JavaScript, jQuery, and CSS, hosted on a Linux/Ubuntu server running Apache and mod_wsgi.

- Built a Python scraper for images and text using lxml and urllib to crawl an arbitrary series of web pages in a script that also parsed and cleaned data for MySQL database storage.

- Abstracted a reusable template for automated Twitter bots after deploying two -- @BotOrDeath and @CmonSister -- to run on Linux crontab, keeping tweets in MySQL databases.