

Shandy Brown, Software Engineering Manager

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Building computer and human systems that contribute to a more humane and advancing world.

"You do not rise to the level of your goals, you fall to the level of your systems" - James Clear

Work Experience

Zitara | Software Engineering Manager | **Full-time. 2022 to present**

- Promoted from Senior Software Engineer to Manager February 2023
- In 18 months, grew the team from 3 engineers and 1 contractor to 7 full-time engineers
- Increased release cadence from once-a-week to multiple-times-per-day
- Changed the CI process from a Jenkins-based system taking up to an hour and needing shepherding, to GitHub Actions-based taking 30 minutes, unattended, while **increasing** test coverage
- Provided technical guidance and leadership as teammates expanded from a primarily web-centric skill set to also cover data pipelines
- Communicated and negotiated across the organization to line up resources, align timelines, and form commitments on software interfaces

Compology | Senior Software Engineer | **Full-time. 2016 to 2022**

- **Developed full-stack web features** with a small team of stellar engineers to solve North America's waste and recycling challenges via IoT devices installed in the most challenging of environments.
- **Solutions Engineering** - Architected, designed, and co-implemented APIs to integrate with our biggest customers. Our APIs allowed the querying and syncing of critical data in real-time.
- **Internal Manufacturing System** - Architected, designed and implemented a system to collect and report telemetry data as hardware devices progressed through their multi-station manufacturing lines. Key challenges included guaranteeing security via public key cryptography, and reliable delivery of data despite intermittent network connectivity.

Hipmunk | Principal Engineer | **Full-time. 2014 to 2016**

- Mentorship of junior-level engineers
- Hotel Images Project - Implemented a system to improve the quality and performance of the hotel product. The system consumes 40 million images from 3rd parties, de-dupes them, runs transformations, stores, and serves.
- Scraperlog Archiver Project - Created a fault-tolerant, high-throughput (gigabytes per hour) system to continuously save and index API responses on S3, including an admin interface. This allowed us to diagnose notoriously elusive pricing and availability issues
- Reliability and Developer Ergonomics - Dockerized our backend stack, augmented the test tooling with canned response modules and tricky mocks

Python Freelancer | **Full-time. 2013 to 2014**

- 2014: Django and JavaScript work on a student application tool.
- 2013: backend work on a geographical web service built on Django.

- Test-driven development champion

Boardcrafting | Entrepreneur | *Full-time. 2011 to 2014*

- Kickstarted a board game accessories company, whose every hat I wore.
- Designed, laser-cut, and shipped physical products to over 400 customers.

VMware | Member of the Technical Staff | *Full-time. 2006 to 2011*

- Installer project: Developer on the ESX 4.0 and ESXi 4.5 installers. Team lead on the ESXi 5.0 installer: Python software that integrates with low-level libraries to install the OS to a disk. Implemented multiple user interfaces, from headless to GUI.
- Founded the Python Users' Group at VMware. Organizer of monthly meetings and presenter of talks.

Technical Skills

- **Systems / Stacks:** HTTP / REST, Databases, Data Pipelines, Business Intelligence, IoT, Continuous Integration / Continuous Delivery (CI/CD), AWS (S3, SQS, ECS, RDS), Linux, Docker
- **Recent Programming:** Python, SQL, Bash. **Less-recent:** many others

Previous roles *1998 - 2006 | Full-time and Co-op*

- J2X Technologies – J2Play Program Lead
- AOL / Quack.com – Software Developer
- Inline Internet Systems – Software Developer
- Sybase – Software Developer
- Ontario Ministry of Transportation – Web Designer

Education

University of Waterloo | *Graduated Honours Bachelor of Mathematics, Computer Science (2001)*

- Software Engineering Option. Society, Technology, and Values Option.

Patents / Publications

- US Patent 10943356, “Method and system for fill level determination”
- “Squares and overlaps in the Thue-Morse sequence and some variants”, RAIRO - Theoretical Informatics and Applications, Volume 40, Issue 3. (This gives me an Erdős number of 2!)

References available upon request