

# DANIEL W. FARLOW

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## EMPLOYMENT

### Vanderbilt University Medical Center

Nashville, TN

Software Engineer

Feb 2022 – Present

- Developed a software development kit (SDK) and REST API wrapper for Caspio's REST API, published the package on the NPM registry, and communicated with other regional stakeholders concerning its usage to help in improving developer productivity
- Improved the efficiency of compiling narrative reports from various partner sites into a unified document for a key stakeholder through effective use of the SDK, reducing the assembly time from twenty hours of manual work to five seconds of code execution
- Refactored data-intensive segment of codebase from sequential single-task processing to concurrent batch processing, enabling efficient streaming of data to files, resulting in a 3x increase in processing speed and a significant reduction in memory footprint
- Devised and documented a process using the SDK to allow execution of arbitrarily complex SQL queries on Caspio data, effectively bypassing the restriction of not having direct SQL Server database access, thus enabling robust and efficient data reporting
- Built a user guide site with a static site generator (Docusaurus) to ensure user guide documentation could always be considered the single source of truth and integrated this site with Netlify CMS to enable team members to easily contribute content
- Led technical interviews for the team that resulted in various full-time hires and subsequently led technical onboarding
- Developed CLI applications to automate data backups, data integrity checks, generate reports, and other mission-critical tasks

### Vanderbilt University Medical Center

Nashville, TN

Frontend Software Engineer

Jun 2020 – Feb 2022

- Trained technical team to adopt Git as version control for application code and to use GitHub to collaborate on code repositories
- Streamlined the generation of monthly data reports for a critical stakeholder by developing an automation workflow that utilizes a REST API which resulted in reducing the overall process time from four days to ten seconds
- Developed application infrastructure to support a monthly reporting process that enables stakeholders to always have access to previous reports, work collaboratively on current reports, and have up-to-date guidance on future reports
- Implemented various user interfaces for consuming data in the form of real-time data dashboards, charts, and reports
- Built a support ticket system to enable team members to more effectively triage, track, and review client requests
- Worked closely with team's UI/UX designer to translate high-fidelity mockups into functional and responsive user interfaces
- Redesigned a user guide from a static Microsoft Word document to a more dynamic and user-friendly PDF using LaTeX

## TECHNICAL SKILLS

- **Professional Language Experience:** Python, React, Node.js, JavaScript, SQL, HTML, CSS
- **Language Experience:** PHP, TypeScript, Express, Redux, jQuery, bash, fish, zsh
- **Tools:** AWS, Netlify, Docker, Heroku, Nginx, Git, GitHub, Material-UI, Bootstrap
- **Databases:** Microsoft SQL Server, PostgreSQL, MySQL, MongoDB
- **Documentation:** JSDoc, Markdown, Docusaurus, LaTeX
- **Concepts:** Agile Scrum, Kanban, REST, OAuth, SDK, CLI, 2FA

## EDUCATION

- Certificate, Software Systems: Behind the Abstractions, Bradfield School of Computer Science (2023)  
Coursework included virtual machines, compilers, memory management, operating systems, databases, and networking
- Certificate, Immersive Full-Stack Web Development Bootcamp, DigitalCrafts (2019)  
Curriculum included myriad front-end and backend technologies for building web applications of variable complexity
- Bachelor of Science, Mathematics, Davidson College (2015)  
Coursework included linear algebra, combinatorics, graph theory, probability, real analysis, and abstract algebra  
Awarded W. Olin Puckett Scholarship for academic and personal excellence

## PROJECTS

- **realanalysis.blog** (2024). Open-source project and platform dedicated to simplifying the learning process of real analysis where collaborative learning is encouraged by allowing users to consume information, contribute content, and interact through blog posts, core material pages, and comments on these posts and pages
- **caspio-sdk** (2022). Software development kit and REST API wrapper for Caspio's REST API that facilitates developer productivity by providing complete coverage of all resource endpoints exposed by Caspio's REST API as well as additional functionality; available on the NPM registry along with extensive documentation and code samples

## ADDITIONAL EXPERIENCE AND AWARDS

- **Technical Authorship:** LeetCode solution author for database problems; author of several published articles in peer-reviewed journals of science and mathematics
- **Cleanest Code:** Rewarded the "cleanest coder" award in DigitalCrafts cohort (20 students)
- **Bug Reporting:** Reported bugs for well-regarded open-source software projects such as MySQL (bug ID#: 104411, 108980) and Docusaurus (issues 8189, 8591, 9698, 9785); recipient of multiple Knuth reward checks
- **Math Teaching:** Taught math for four years at the secondary level, including courses such as Calculus and Discrete Mathematics