

Brian H. Rutledge

Software Engineer

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<https://github.com/bhrutledge>

Summary

I have been writing and using software to solve problems for over 15 years. I was an embedded software engineer for three years, then left the industry in 2005 to pursue people-oriented work. I was fortunate to find it at a large bike shop, where I enjoyed the flow of a variety roles, from selling bikes to administering software. In 2014, I made the switch to professional web development, with a focus on exercising my skills with like-minded people working to speed the adoption of renewable energy. In my free time, I have expanded my software development skills by building responsive websites back-to-front. I enjoy studying software systems and explaining how they work.

Key Skills and Technologies

Adapting, Analyzing, Assimilating, Coding, Communicating, Debugging, Documenting, Editing, Explaining, Programming, Researching, Teaching, Testing, Troubleshooting

Software Development: Python, JavaScript, SQL, Git, Linux/Unix, Data Engineering, Test-Driven Development, Virtual Machines, Docker

Web Development: Django, Flask, REST APIs, Celery, Selenium, Vue, Vuex, Webpack, jQuery, Backbone, D3, Charts, Maps, HTML, SASS, CSS, BEM, Bootstrap, Markdown, AWS, Deployment, Responsive Design, Typography, Photography

Professional Experience

EnergySage

Boston, MA

The world's first and largest online marketplace for solar panel installation

Full Stack Web Developer

2014–Present

- Designed and developed a Django REST Framework API, admin interface, and Vue front-end for consumers to browse and filter solar loans, with click-through monetization
- Advocated for, coordinated, and contributed to the adoption of the Vue framework for developing a complex single-page app to implement a new consumer experience
- Developed and maintained a GitHub repository for reproducible data engineering and analysis with the Jupyter Notebook and related Python libraries

- Improved dependency management, documentation, and database fixtures for the Django development environment
- Coordinated and contributed to two major Django upgrades between LTS releases
- Developed revamps of core user interfaces, such as consumers comparing quotes online and installers managing leads, using Backbone and jQuery
- Developed an interface to give solar installers insight into their behavior compared to competitors, using Chart.js for interactive charts and Python for data aggregation
- Developed and deployed a responsive IFrame [widget](#) for partners to [embed](#) in their content, using JavaScript, Webpack, and Netlify
- Developed a Django application for consumers to browse [smart energy products](#), with click-through monetization, and a front-end editing mode to allow non-technical staff to maintain categories and products
- Introduced the BEM naming convention to improve SASS and HTML organization
- Integrated the Django CMS project to streamline content creation and edits by non-technical staff, and instructed staff on its usage
- Developed [interactive maps and tables](#) of solar data for states, using D3 for visualization and Pandas for data aggregation
- Developed the [primary registration page](#) for consumers, using Leaflet for mapping and Pandas for data aggregation
- Developed self-serve, periodic, and on-demand CSV exports for staff, installers, partners, and media using SQL and Pandas
- Integrated with the HubSpot API to sync the Django user database, enabling marketing and sales workflows
- Designed and developed a Django application for pushing consumer data to solar installer CRMs, e.g. Salesforce
- Contributed to the growth of the development team through interviews, technical onboarding, code review, and knowledge sharing
- Coordinated, contributed to, and influenced project planning & design discussions with stakeholders
- Built HubSpot workflows, emails, and landing pages to automate business processes and support marketing efforts
- Provided tech support and vendor coordination for networking, phones, and Google Apps

Freelance

Full Stack Web Developer

2006–Present

- Built [my band's website](#) using Django
- Built a [web application](#) using Flask to transform tab-delimited files into searchable and sortable tables, enabling a small retailer to quickly analyze sales reports
- Built [my personal website](#) with the Pelican Python framework
- Developed a [PHP framework](#) for quickly building [brochure websites](#)
- Built single-page [brochure websites](#) with responsive layouts
- Deployed websites to Linux shared hosting services, installing software as needed

Belmont Wheelworks

Belmont, MA

Bicycle sales and service, catering to all levels of cyclists in greater Boston

IT Operations Manager

2007–2014

- Built and managed the [business website](#) using the SmartEtail CMS, and developed a custom front-end with CSS and JavaScript
- Wrote Python scripts to synchronize the store's inventory to the website catalog, resulting in increased customer inquiries and foot traffic
- Wrote SQL queries and Python scripts to generate custom reports of customers and inventory, streamlining tasks such as mailing list generation and barcode management
- Developed a physical count procedure and programmed a handheld data collector to improve inventory accuracy
- Built a [Squarespace website](#) for the in-house frame builder
- Configured and managed the MindBody web application to replace a paper binder for appointment booking
- Configured and managed Google Apps for email, calendars, and documents
- Maintained a Google Site for the company intranet, documenting numerous procedures and policies, and enabling easy viewing of schedules and calendars
- Managed a major upgrade of the CounterPoint retail management software
- Established and managed the relationship with an IT consulting firm to ensure timely and competent network management for all locations
- Provided IT vendors with on-site troubleshooting, hardware installation, and new project scopes, resulting in expedited solutions to problems and fewer billable support hours
- Provided staff training and support for all software systems
- Designed web and print forms for collecting customer questions and information

Bicycle Fitter, Buyer, Salesperson

2006–2014

- Installed, replaced, and adjusted bicycle components and instructed clients on pedal technique and posture, resulting in a more comfortable, efficient, and safe experience
- Completed bicycle fitting certification programs from SBCU, SICI, and Retül
- Managed customer relationships by email, phone, and appointment
- Ordered and stocked electronics, saddles, nutrition, and media
- Trained staff and customers on electronics

Darwin's Ltd.

Cambridge, MA

Independent coffee and sandwich shop serving Harvard Square

Buyer, Sandwich Maker, Barista

2005–2006

- Ordered and stocked raw ingredients and paper goods
- Prepared and served beverages and sandwiches

Applied Innovation Inc.

Dublin, OH

Network management hardware and software for the telecommunications industry

Software Engineer

2001–2005

- Assumed sole development responsibility for a troubled network device, turning it into a major source of income
- Designed, developed, and documented features for network devices using 68k Assembly, C, C++, Java, and Python
- Designed and developed a Perl web application for automated regression testing of network devices
- Completed software releases as sole developer and as part of a team
- Diagnosed and addressed field issues in conjunction with customer service

The Ohio State University

Columbus, OH

System Operations Center Operator, Lab Consultant

2000–2002

- Responded to help requests in a Unix and Windows environment
- Designed and developed a graphic FAQ editor in Java
- Provided programming and Unix assistance to students in labs of 50–100 computers

Grader

1999–2000

- Graded papers for honors introductory software development course in C++
- Provided guidance for 35–40 students during and outside of class

Education

The Ohio State University

Columbus, OH

Bachelor of Science, Computer & Information Science

2002

- Graduated Cum Laude with Honors in the Liberal Arts, 3.640 GPA

