

Dan Fitch

Software developer

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I am driven to improve systems to make them work better, automate the frustrating parts, and help people get things done.

Experience

2019 – 2023 **Research Programmer** **UW-Madison Center for Healthy Minds, Madison, WI**

- Supported research teams with software, storage, and psychophysiological and other research hardware
- Built custom software solutions for research, including complex instruments and reporting using REDCap, EMA via SMS, mobile app integrations, payment systems, behavioral tasks, and various in-browser tasks for remote studies
- Assisted on Python and Matlab pipelines for data QA, analysis, and sharing, including BIDS-formatted EEG, MRI, and various psychophysiological data streams
- Helped with general IT support and improved documentation and processes; active in grassroots attempts to improve diversity, equity, inclusion, and the wider community culture

1998 – 2018 **Senior Software Developer** **Legislative Technology Services Bureau, Madison, WI**

- Re-engineered custom .NET constituent/contact management system with complex mailing lists, topic and legislation tracking, and extensible ORM-based architecture to allow for later additional web and/or mobile interfaces
- Created extensible, searchable Solr-backed documents site to replace legacy proprietary systems
 - Faceted metadata search over corpus of 10 million documents
 - Automated cross-reference linking for natural-language references
- Drove a team push for improved practices, including automated unit and full-stack tests with continuous integration

Education

2014 – 2015 **B.S. Information Science and Technology** **UW-Milwaukee SOIS**

Skills

- **General:** Programming alone or with a team, data wrangling, automation, testing, software and hardware troubleshooting, general IT support, systems analysis, process improvement, requirements gathering, project planning, learning on the fly, technical communication and documentation, typography, design.
- **Ecosystems:** Windows, Mac, *nixes (Ubuntu, Scientific Linux, etc.), Android, iOS, Arduino, Biopac.
- **Languages:** Fluent in Python, Matlab, R, F#, C#, Javascript, Ruby, Lisp, \LaTeX , various shell dialects.
- **Web development:** Django, Rails, MVC.NET, D3, React, Angular, and various other JS frameworks. Familiar with administering Apache, IIS, nginx, lighttpd. Can also write HTML, CSS, etc.
- **Research:** HTCondor, Globus, REDCap, Qualtrics, PsychoPy, E-Prime, Lab.js, Gorilla, AcqKnowledge.
- **Data:** SQL maintenance and scripting (familiarity with SQL Server, Oracle, Postgres, MySQL, SQLite, etc.), Solr, S3.

Interests

My hobbies include: writing, music, art, board game design, games of all kinds, electronics, cooking, axiology, and activism.