SCOTT W HARDEN, DMD, PhD

Gainesville, Florida | [SWHarden@gmail.com](mailto:SWHarden@gmail.com) | [SWHarden.com](http://www.SWHarden.com) | [@swharden](http://www.GitHub.com/swharden) | [LinkedIn.com/in/swharden](https://LinkedIn.com/in/swharden) | 352-451-6240

Software developer with 14 years of experience developing technical solutions for scientific, industrial, and biomedical applications. With a background in neuroscience and biotechnology research, my interdisciplinary experience enables me to collaborate with domain experts to develop innovative solutions at the intersection of science and technology.

# Technical Skills

Primary Languages: C# / .NET, Python  
Additional Experience: ASP.NET Core, AWS, Avalonia, Azure, Blazor Server, Blazor WebAssembly, C, C++, CSS, Docker, Git, HTML, Java, JavaScript, Linux, .NET MAUI, NuGet, PHP, React, TypeScript, Windows Forms, WinUI, WPF, SQL

# Experience

Research Scientist (2018-present) University of Florida

* Designed and implemented advanced domain-specific software to analyze and visualize complex electrical and optical data using a variety of technologies including C#, C/C++, Python, ASP.NET, Blazor, and JavaScript
* Created and maintained automated data analysis workflows used by over 30 scientists
* Trained and mentored more than 20 junior scientists overseeing complex multi-year scientific projects

Software and Embedded Systems Developer (2018-present) Harden Technologies, LLC

* Developed custom software and hardware solutions for clients including custom data visualization solutions, automated analysis and report generation, and embedded biomedical device design and manufacturing

Lead Software Engineer (2019-present) ScottPlot.NET

* Primary maintainer of a large open source C#/.NET package for real time analysis and visualization of large datasets
* 2.8M NuGet installs, 5.5k GitHub stars, 170 contributors, used in 2k GitHub projects, 4.5k resolved issues and PRs

Pre & Postdoctoral Researcher (2007-2009, 2012-2018) University of Florida & University of Central Florida

* Developed application-specific software to enable automated analysis of 2D and 3D microscopy data
* Supported projects resulting in 16 primary and co-author publications in scientific journals

# OPEN SOURCE Projects

* [ScottPlot](https://scottplot.net) - .NET package for data visualization with 2.8M installs, 5.5k GitHub stars, used in 2k GitHub projects
* [PyABF](https://swharden.com/pyabf/) - Python package for signal analysis of electrophysiology data, continuously maintained for over 7 years
* [LJPcalc](https://swharden.com/LJPcalc/) - Blazor WebAssembly application for calculating liquid junction potential referenced in over 50 publications
* [QRSS Plus](https://swharden.com/qrss/plus/) - Cloud native web app for visualizing radio frequency spectrograms continuously maintained since 2013
* [FftSharp](https://github.com/swharden/FftSharp) - .NET package enabling hardware-agnostic fast Fourier transform (FFT) calculation of complex datasets
* [Spectrogram](https://github.com/swharden/Spectrogram) - .NET package for real-time analysis of streaming signal data in both time and frequency domains
* [FSKView](https://swharden.com/software/FSKview/) – Desktop application enabling real time monitoring of ultra narrowband frequency shift keyed radio signals
* [USB Counter](https://swharden.com/blog/2019-08-03-usb-frequency-counter/) - Embedded device for precision frequency measurement and pulse counting with a USB interface
* [Portfolio](https://swharden.com/portfolio/) - Additional hardware and software projects with links to source code and demos that run in the browser

# Education

* Doctor of Philosophy, Biomedical Science / Neuroscience (2016) University of Florida, Gainesville, Florida
* Doctor of Dental Medicine, College of Dentistry (2016) University of Florida, Gainesville, Florida
* Master of Science, Molecular Biology / Biotechnology (2009) University of Central Florida, Orlando, Florida