

# SCOTT W HARDEN

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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

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**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

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**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 PhD students overseeing complex multi-year scientific projects

**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 by 2k GitHub projects, 4.5k resolved issues and PRs

**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

**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

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- [PyABF](#) - Python package for signal analysis of electrophysiology data, continuously maintained for over 7 years
- [LJPcalc](#) - Blazor WebAssembly application for calculating liquid junction potential referenced in over 50 publications
- [QRSS Plus](#) - Cloud native web app for visualizing radio frequency spectrograms continuously maintained since 2013
- [FftSharp](#) - .NET package enabling hardware-agnostic fast Fourier transform (FFT) calculation of complex datasets
- [Spectrogram](#) - .NET package for real-time analysis of streaming signal data in both time and frequency domains
- [FSKView](#) - Desktop application enabling real time monitoring of ultra narrowband frequency shift keyed radio signals
- [USB Counter](#) - Embedded device for precision frequency measurement and pulse counting with a USB interface
- [Portfolio](#) - Additional hardware and software projects with links to source code and demos that run in the browser

## EDUCATION

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- Doctor of Philosophy, Biomedical Science / Neuroscience (2016) University of Florida, Gainesville, Florida
- Master of Science, Molecular Biology / Biotechnology (2009) University of Central Florida, Orlando, Florida