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

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

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

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

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

- **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

- 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