SCOTT W HARDEN, DMD, PhD

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Software developer with over ten years of experience engineering technical solutions for scientific, industrial, and biomedical applications. With advanced degrees in clinical and biomedical science, my interdisciplinary experience enables me to collaborate with domain experts to develop innovative solutions at the intersection of science and technology.

SKILLS

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

EXPERIENCE

Research Scientist (2018-present) University of Florida
- Engineered automated analysis workflows to improve accuracy and increase the performance of over 30 scientists
- Mentored more than 20 junior scientists, providing technical training for and oversight of complex multi-year projects
- Facilitated the adoption of best practices in CI/CD, deployment, monitoring, documentation, and automated testing

Software Developer (2018-present) Harden Technologies, LLC
- Engineered custom software and hardware solutions for clients in biomedical and industrial sectors, focusing on specialized data analysis and visualization tools as well as designing and prototyping embedded biomedical devices

Software Developer (2019-present) ScottPlot.NET
- Creator and primary maintainer of a large open source C#/.NET package for scientific data analysis and visualization
- 2 million installs, 5.5k GitHub stars, over 500 contributors, used in 2k GitHub projects, 4.5k resolved issues and PRs

Pre & Postdoctoral Researcher (2012-2018) University of Florida
- Designed, implemented, and maintained data analysis workflows, specializing in multidimensional imaging data
- Contributed to projects that culminated in 16 primary and co-author publications in peer-reviewed scientific journals

PROJECTS

- **ScottPlot** - .NET package for data visualization with 2.8M installs, 5.5k GitHub stars, used in 2k GitHub 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
- **RF 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 (PhD) - Biomedical Science / Neuroscience	University of Florida	2012-2016
• Doctor of Dental Medicine (DMD) - Colleges of Dentistry & Medicine	University of Florida	2009-2016
• Master of Science (MS) - Molecular Biology & Microbiology	University of Central Florida	2007-2009