Nickolas Lloyd

Software Engineer

Profile

Engineer, maker, hacker. I love working on challenging problems to find robust and efficient solutions.

Contact

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smindinvern.github.io

github.com/smindinvern

Interests

— Professional —

- Programming language design
- Embedded systems
- Signal processing
- Measurement science

— Personal —

- Digital electronics
- Open source
- Running
- Video games

Projects

`lisp.net`

Lisp interpreter with macro facilities for the .NET platform.

`smindinvern.Parser`

A simple monadic parser library for F#.

`usb-micro`

From-scratch USB libraries for ARM microcontrollers. Includes USBTMC and USBHID implementations.

Education

- University of North Carolina at Greensboro, Greensboro, NC
  Bachelor of Science in Computer Science — December 2017

Experience

- Qorvo (previously RF Micro Devices), Greensboro, NC
  Senior Software Engineer — April 2019 – present
- Software Engineer — January 2013 – April 2019
- Software Engineer (contractor) — June 2011 – January 2013

Maintain software for the automated test and characterization of RF devices, as well as the analysis and warehousing of collected data. Responsible for bug fixes, implementation of new features, planning and implementation of architectural and usability enhancements, automation of CI processes, and end-user support.

Cultivate and leverage expertise in the RF semiconductor, wireless communications, and test and measurement domains. Create software solutions for a wide variety of business and technical problems spanning multiple domains. Mentor other developers and share knowledge with engineers and technicians on a daily basis.

Other accomplishments

- Implemented and standardized CI process for .NET projects using Azure DevOps and GitLab.
- Migrated legacy VB6 application to VB.NET, allowing team to leverage modern development tools and processes.
- Developed tool for fixture deembedding of balanced multi-port S-parameter data to work around limits of test equipment.
- Developed a software solution for offline (software in the loop) validation of test software to allow for fast, robust verification without the need for physical test equipment.
- Developed microcontroller firmware and companion desktop application to control USB-connected product demo board.
- Developed integrated software system to replace legacy load pull software, resulting in greatly reduced calibration and test times.

Skills

●●●●●	C	●●●●●	C#
●●●●●	F#	●●●●●	VB
●●●●○	C++	●●●○○	Haskell
●●●○○	Python	●●○○○	Lisp
●●○○○	Java		

Open source contributions

Emacs Lisp JIT — `git.savannah.gnu.org`
Branch of Emacs that adds support for JIT compilation of Emacs Lisp bytecode using GNU LibJIT.

Fossil SCM — `fossil-scm.org`
Support for bidirectional synchronization between Fossil and Git repositories. Allows wrapping a Fossil repository in a Git interface or vice versa.

Advanced Linux Sound Architecture — `git.kernel.org`
Added mixer controls to change jack mode on Sigmatel hda sound cards.