Matt Carberry

Contact
hireme@mattcarberry.de

Languages
English - Native
German - B1

Programming
Python, C++, C

Software
Orcad Capture, Cadence Allegro, KiCad, LTSpice, Linux (Arch), Windows, OS X

Test Equipment
Multimeter, Oscilloscope, Signal Generator, Electronic Load, Spectrum Analyzer, Vector Network Analyzer, Logic Analyzer, Time-Domain Reflectometer (TDR),

Hobbies
Amateur Radio

Education

Bachelor of Science, Computer Engineering Dec 2017
University of California, Santa Cruz
Digital Hardware Concentration, Electrical Engineering Minor

Work History

Hardware Engineer Jan 2020 - Jun 2023
Teradyne GmbH, Berlin, Germany

- Acted as stakeholder for external IC design process, representing the board design team's requirement and use cases
- Wrote Python test suite to evaluate pre-production IC using demonstration board and external test equipment
- Lead DUT Power Supply instrument design efforts within Nextest division
- Developed documentation (theory of operation, register maps, DAC/ADC equations) for new board designs to enable software team to understand functionality and develop runtime software

Hardware Engineer Aug 2018 - Jan 2020
Teradyne, San Jose, CA

- Designed sections of new tester instruments to satisfy new product specifications
- Developed calibration and diagnostic plans for new instrument designs
- Performed initial board bring-up, power supply design validation and installation in system to enable swift software development
- Diagnosed root-cause of diagnostic failures when transitioning tester instrument boards from prototype to volume manufacturing
- Worked in parallel with software team to debug any issues that arose and quickly develop rework documentation when necessary
- Analyzed test data over large number of instruments to verify achievement of customer specifications for new designs

Software Engineer May 2017 - Aug 2018
Teradyne, San Jose, CA

- Extended a mature codebase (C/C++) to add support for new hardware platforms and add functionality to existing ones
- Wrote software to characterize circuit board and IC behavior and worked with hardware design engineer to develop calibration and diagnostics routines to achieve target specifications
- Reproduced reported issues, investigated to find root cause and developed fixes using a combination of software and hardware debugging techniques
- Developed characterization hardware and software utilizing external test equipment to assist in design validation and debugging