Matthew Farstad

🌐 mfarstad.com | ✉ matthewwilliamfarstad@gmail.com | 📞 612-231-3663 | ⌨ github | in linkedin

EDUCATION

WINONA STATE UNIVERSITY
BS in Computer Science
May 2020 | Winona, MN
College of Science and Engineering
GPA: 3.4 / 4.0

COURSEWORK

UNDERGRADUATE
Practicum
Operating Systems
Machine Learning
Advanced Networking
Software Engineering
Computer & Network Security
Embedded Systems
Applied Database Management
Distributed Application Development

CERTIFICATIONS
AWS Fundamentals: Going Cloud Native
December 2019 | Coursera
React.js Essential Training
December 2019 | Linkedin / Lynda

SKILLS

LANGUAGES
Java • C# • C++ • C
Go • Dart • Javascript
Python • CSS • HTML • SQL
Bash

LIBRARIES / TECHNOLOGIES
Flutter • UWP • Realm • NATS
Node.js • Gorilla/Mux • Express
AJAX • Redis • MQTT • Docker
Dapper • ODBC • JDBC • JSP
Entity Framework • Swashbuckle
JDBC • Selenium • Git • JavaFX
Regex • React • React Native
Hibernate • Electron • SVN
Echo • WPF • TFS • QT5 • FreeRTOS
CNG • UART

SOFTWARE / PLATFORMS
Visual Studio • Visual Studio Code
IntelliJ • GoLand • SourceTree
Windows 10 • JavaFX Scene Builder
OSX • Ubuntu Linux • Arch Linux
Windows 10 IOT Core • Rasbperry Pi
Postman • Mulesoft • AWS • Azure
Firebase • AWS • Digital Ocean
Qt Creator

EXPERIENCE

FASTENAL Embedded Software Engineer
April 2021 - Present | Winona, MN
- Created lightweight, event-driven, and fast receive/parse/transmit UART pipeline for a proprietary messaging protocol in C using FreeRTOS.
- Ported QT4 application to QT5. Overhauled UI to create a more approachable and transparent UX.
- Refactored a decade old codebase to be easier to read and change, and to adhere to modern C++ conventions like not being full of memory leaks.
- Customized SOM OS using Yocto Linux to suit application needs.

FASTENAL Software Developer
Feb 2020 - April 2021 | Winona, MN

- Rebuilt customer file generation software for the Fastenal Product Locator to support Realm files, shortening generation times from 13 minutes to 2 minutes.
- Expanded support for Product Locator Kiosk software from 4 devices to 80+.
- Created fake customer generation software using Go to streamline the implementation of new features and to drastically increase testing capabilities.
- Rewrote application product search logic to be 88% faster and twice as accurate using a novel TF-IDF ranking system

SEMIREG INDUSTRIES, LLC. Consultant
May 2019 – May 2020 | Winona, MN
- Created label printer emulation software with Python, saving thousands of dollars in the long term by eliminating the need for buying new label printers when adding support for different models.
- Created a standalone speech-to-text solution using deepspeech, a STT machine learning model.
- Developed POC React Native mobile app for industrial client.
- Confidential IOT work involving Node.js, Azure, and Redis.

WINONA STATE UNIVERSITY Software Tester / Developer
October 2016 – May 2020 | Winona, MN
- Cross compiled Python libraries written in C from x86 to MIPS Linux.
- Shortened unit testing life cycles from 2 weeks to 3 days by creating a modular and extensible library of helper methods and using Test Driven Development.
- Prototyped React Native mobile apps to supplement proprietary device management application.

MFARSTAD.COM | Digital Ocean, Ubuntu, Golang, Echo
January 2019 - Present
Personal website that hosts my personal projects and resume. Built with Echo in Go.
Link to website.

TUCKER ZODD | Composer and Producer + Audio Engineering
Personal project with two released albums. Available on Bandcamp, Spotify, and Apple Music.
Link to releases.

TERMDBMS | SQLite DBMS TUI (750 stars as of 10/1/21)
FOSS SQLite DBMS TUI for viewing, editing, updating, and querying SQLite databases.