ERIC SEALS

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Experience

GARMIN Olathe, KS
Software Engineer *Jul 2022 - Present*

- Developed several new features in C++ for Garmin Dezl and other consumer GPS navigation products
- Created and tested performant application code running on a Yocto embedded platfom
- Responsible for feature development, code review, and weekly release builds
- Collaborated daily with Project Managers, UX Designers, and Software Engineers across different teams
- Paricipated in bi-weekly sprints and helped optimize Jenkins CI build jobs

KU School of Engineering Lawrence, KS
Graduate Teaching Assistant *Aug 2020 - Dec 2021*

- Explained technical topics related to embedded systems and real time applications

GARMIN Olathe, KS
Software Engineer Intern *Nov 2020 - May 2021*

- Developed software in C++ for Garmin Tread
- Wrote production code to increase general performance, fix bugs, and polish the GUI on Tread (an Outdoor Adventure Product)
- Reworked legacy satellite positioning pages which now run on thousands of devices

Education

University of Kansas Lawrence, KS
***M.S. Computer Science**, College of Engineering* *Aug 2020 - May 2022*

- Cumulative GPA: 3.63/4.00
- Thesis: Memory Bandwidth Dynamic Regulation and Throttling

University of Kansas Lawrence, KS
***B.S. Computer Science**, College of Engineering* *Aug 2017 - May 2020*

- Cumulative GPA: 3.72/4.00

Projects

- **Bandwatch:** System-wide memory bandwidth regulation system, github.com/erjseals/bandwatch
  - Implemented a real-time system which reduced memory-contention induced task slowdown from 14.7x to 3.6x
  - Designed a dynamic regulation algorithm making use of real-time memory utilization statistics
  - Built as a Linux Kernel module in C targetting the NVIDIA Jetson Nano platform
- **AudioBud:** Audio Visualizer for Chrome, github.com/AudioBud-Chrome-Extension
  - Created a time and frequency domain audio-visualization Chrome Extension
  - Implemented several digital audio filters for modifying audio output (lowpass / highpass / bandstop)
  - Added customization features menu allowing users to modify graphical visuals and filter parameters
- **Sharp Edges:** Client/Server to study the performance gains with 5G Edge Computing, github.com/sharp-edges-android
  - Established communication between the two entities via TCP/IP Sockets
  - Compared YOLOv3 Object Detection latencies between computations on an Android app, a local server, and Google Cloud

Skills

Languages: C++, C, Python, Bash, Latex **Tools & Technologies**: Git, RTOS, Embedded, Juce, Boost, MS VS/VC, Vim