ERIC SEALS

erjseals@gmail.com | 785 554 2736
linkedin.com/in/erjseals | github.com/erjseals

Experience

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

- Developed several new features in C++ for Garmin Dezl and other Consumer Automotive products
- Responsible for feature development, code review, and weekly release builds
- Collaborated daily with Project Managers, UX Designers, and Software Engineers across Mobile/Server/Low-Level teams

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

- Explained technical topics related to embedded systems and real time applications
- Designed a final project for the course where students implement the research project DeepPiCar
- Students utilized concepts like PWM, LIDAR, UART, and I2C with the platform to build an autonomous RC car

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

- Developed software in C++ for Garmin Tread
- Wrote production code to increase general performance, to fix bugs, and to polish the UX on Tread in anticipation for its launch
- 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 co-running task slowdown from 14.7x to 3.6x
  - Designed the dynamic regulation algorithm to make use of real-time memory utilization statistics
  - Built as a Linux Kernel module in C targetting the NVIDIA Jetson Nano platform
- **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
- **AudioBud:** Audio Visualizer for Chrome, github.com/AudioBud-Chrome-Extension
  - Created a time and frequency domain audio visualizer Chrome Extension
  - Implemented several digital audio filters for modifying audio output (lowpass/highpass/bandstop)
  - Added customization features via an options menu allowing users to customize graphical visuals and filter paramaters

Skills

Languages: C++, C, Python, Latex, Shell

Tools & Technologies: Git, Juce, Boost, RT Embedded Systems, Vim