

# ERIC SEALS

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## Experience

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### Guardsquare

Compiler Software Engineer

May 2024 – Present

- Developed and enhanced machine-code-level obfuscation techniques for iOS applications, contributing to iXGuard, a comprehensive mobile app protection solution
- Implemented new LLVM-based code transformations and optimizations to improve resilience against reverse engineering while maintaining performance and correctness
- Researched, prototyped, and productionized advanced obfuscation and compilation techniques, leveraging knowledge of LLVM internals and compilation pipelines
- Debugged complex issues across the LLVM toolchain and generated machine code, providing fixes and technical support for client-reported problems
- Worked extensively with x86\_64 and ARMv8-A architectures, ensuring correctness and robustness of low-level transformations across platforms
- Wrote maintainable, high-performance C++ code, balancing algorithmic efficiency with clarity for long-term maintainability

### GARMIN

Software Engineer

Olathe, KS

Jul 2022 – Oct 2023

- Developed advanced features in C++ for Garmin Dezl, including a high-performance weather map overlay utilizing OpenGL, enhancing real-time data visualization and user interaction
- Coordinated with a cross-functional team to enhance the weather map overlay, implementing a dynamic data querying approach that adjusted for zoom/grid size, significantly reducing data size requirements and improving application performance
- Engineered performant application code for Yocto-based embedded platforms, optimizing system-level performance and demonstrating a deep understanding of hardware-software integration
- Owned feature development, conducted code reviews, and managed weekly release builds to ensure high-quality deliverables
- Collaborated seamlessly with Project Managers, UX Designers, Hardware Engineers, and cross-functional Software Engineers

### KU School of Engineering

Graduate Teaching Assistant

Lawrence, KS

Aug 2020 – Dec 2021

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

### GARMIN

Software Engineer Intern

Olathe, KS

Nov 2020 – May 2021

- Developed software in C++ for Garmin Tread, an Outdoor Adventure Product
- Wrote production code to enhance overall performance, resolve bugs, and refine the graphical user interface (GUI) of Tread
- Successfully revamped legacy satellite positioning pages, enabling their smooth operation on thousands of devices

## Education

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### University of Kansas

M.S. Computer Engineering, College of Engineering

Lawrence, KS

Aug 2020 – May 2022

- Cumulative GPA: 3.76/4.00
- Thesis: Memory Bandwidth Dynamic Regulation and Throttling (Linux kernel module, Jetson Nano)

### University of Kansas

B.S. Computer Engineering, College of Engineering

Lawrence, KS

Aug 2017 – May 2020

- Cumulative GPA: 3.72/4.00

## Skills

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**Languages:** C++, Python, C, JavaScript

**Tools & Technologies:** Embedded, Linux, C++ Boost, CUDA, OpenGL, Git