Kevin R Kelly

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Education

Pennsylvania State University August 2019 – December 2022
Bachelor of Science in Computer Engineering *University Park, PA*

- GPA: **3.85**/4

Experience

FAST Enterprises July 2023 – Present
Implementation Consultant *Sacramento, CA*

- Effectively communicate with clients to understand their business requests, translating said requests into tailored solutions within the FAST system, adhering to internal best practices.
- Develop complex **SQL** queries for specific data requests and system configuration analysis. Enhance production query performance through Execution Plans and SQL statistics analysis.
- Deliver confident and impactful client demonstrations, along with technical presentations to internal teams, effectively communicating complex technical concepts in a digestible format.
- Initiate discussions about and tirelessly advocate for stronger software oriented organizational principles. Examples include adopting style guides for the languages we use, adding unit and integration testing to our testing procedures, and refactoring for future maintainability while making other changes.

RTD Embedded Technologies, Inc. May 2022 – August 2022
Engineering Intern *University Park, PA*

- Maintained and updated Legacy **Linux Kernel Drivers**, adeptly diagnosing issues and analyzing Linux Kernel source code to resolve bugs and implement driver updates.
- Developed a **Python** tool for automated driver retrieval and testing, effectively identifying and addressing widespread bugs resulting from Kernel updates.
- Diligently adhered to the comprehensive document control protocols required by **ISO 9001** and **AS9100** standards.
- Successfully ported a legacy ROM DOS manufacturing test to a Python script for Linux, modernizing the testing process.
- Created a **Python** tool integrating SQL database querying to automatically retrieve and execute the up to date manufacturing tests, triggered by scanning a barcode on the testing line.
- Initiated the development of a user-friendly Driver GUI, enhancing end-user experience and streamlining internal testing processes.

Projects

Boomic Music | *Swift, SwiftUI, MVVM* November 2022 – December 2022

- OS music playback app for high resolution FLAC files with powerful library organizaton tools.
- Built in **Swift** with **SwiftUI** and **MVVM** architecture. Automatically populates the music library through the iOS Files app, allowing for drag and drop. Organizes music into albums and artists based on file metadata and displays album art embedded in the file or located in the same directory.
- Built with functional programming principles, composed with
- Built with **persistent data structures** and **functional programming principles** still taking advantage of SwiftUI's powerful observation libraries using **Combine queues** for decoupled and reactive communication.
- Utilizes a transaction based persistence system, allowing for users to roll back erroneous changes.
- Architecture and design decisions discussed in detail at [yonesauce.com].

Channels | *C, GDB, Valgrind, pthread, semaphores* January 2022 – May 2022

- Multi-threaded buffered channel system enabling threads to send or receive data. Includes a 'select' function enabling threads to submit multiple send/receive requests, ensuring that only one request is completed.
- Implemented in **C**. Employed linked lists for queue management, **mutex locks** for thread safety, and **semaphores** to control access to resources. Utilized **GDB** and **Valgrind** for debugging and memory safety.