Spencer Bone

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Blacksburg, VA

SKILLS AND TOOLS

Languages: Java, C, Python, Kotlin
Tools: GitHub, Android Development Studio, Wireshark, Figma, Eclipse Memory Analyzer
Skills: App Development, OS, Full-stack, Testing, Databases

PROJECTS

Book-E – React Bookstore Website   August 2024 – December 2024
- Leveraged Figma, CSS, and HTML to craft intuitive design frameworks and visually appealing layouts
- Engineered advanced front-end functionality by programming from scratch with JavaScript, React, and React Hooks, transforming designs into dynamic, user-centric interfaces featuring sophisticated interactions, including animations and seamless cart management
- Designed and managed robust database structures using MySQL and DAO Patterns, enabling efficient querying and retrieval of categorized book data.

PintOS – Updating a Basic OS   January 2024–May 2024
- Initially starting with adding process scheduling, implementing system calls, advancing the file system, where my main was contribution being the implementation of a secondary page table and managing frame/page usage.
- Bolstered by the utilization of multiple threads to execute a single process (as initially it was threads could only run single processes) allowing for parallel computation, cutting down on execution time.
- Process Scheduling entailed making a timer for threads and CPU balancing between processors to reduce idle times of executing threads. Implementing system calls involved putting the call's arguments on a child processes stack and taking those arguments to execute specific system calls.

Fancy Gallery – Android Photo Database App   November 2023–December 2023
- A Solo Project in Kotlin in Android Development Studio
- Network queries and an SQL database were used to make it possible to see photos uploaded live to an online database website
- Utilized multiple fragments to make it possible to switch between landscape and portrait, as well as a fragment for a geographical location (obtained from photos in database to show where photos were taken)

EXPERIENCE

Graduate Teacher's Assistant   *Virginia Tech, VA*
CS Bridge Program   *August 2024–May 2025*
- Guided students in setting up and using Eclipse IDE for Java programming.
- Instructed students on foundational programming structures (arrays, lists, queues, stacks) and object-oriented programming in Java.

Undergraduate Teacher's Assistant   *Virginia Tech, VA*
CS3304 Comparative Languages   *August 2023–May 2024*
- Guided students in adapting to and learning various programming languages, including Pascal, C++, PROLOG, Golang, Scala, Haskell, and Ruby.
- Taught key concepts such as functional programming, parse trees, interpreters, and advanced recursion, using languages suited to each paradigm (e.g., Scala for functional programming), establishing the need for different programming languages.

EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech)   *Blacksburg, VA*
Bachelor of Engineering in Computer Science, Minor in Economics and Mathematics   *August 2020-May 2024*
Cumulative GPA: 3.73 / 4.00   Major GPA: 3.80 / 4.00   *Dean's List: Fall 2020 – Present*

Virginia Polytechnic Institute and State University (Virginia Tech)   *Blacksburg, VA*
Masters of Engineering, Concentrations: Software Engineering/Networking   *August 2024–May 2025*

EXTRA

Favorite Electives: Quantum Computation, Cryptography, Computer Music, Network Security