**Daniel Kim**

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**Education**

**The University of Texas at Austin** May 2025

*Bachelors of Science, Computer Engineering*

*GPA: 3.6/4.0*

**Job Experience**

**HPC Software Engineer Intern** – *Hewlett Packard Enterprise* May 2023 – Present

* Designed monitoring systems and dashboards for the El Capitan project, a two exaflop supercomputer at the government-funded Lawrence Livermore National Laboratories, optimizing data processing and resource allocation and leading to a decreased acceptance period for HPE.
* Implemented and configured custom Grafana dashboards and data monitoring system, utilizing time-series databases, Apache Kafka, RESTful APIs, and other technologies on HPE supercomputers.
* Developed a Python Kafka Producer with multiprocessing to efficiently parse and transform logs and metrics from next-generation HPC hardware (Rabbit) into JSON strings, enabling seamless integration with OpenSearch.
* Utilized command-line interface (CLI) to perform system configurations, including HPE Cluster Management Software, ensuring optimal functionality and performance of HPE supercomputers.
* Developed a robust C++ script to securely wipe memory from diverse hardware components on next-generation HPC hardware (Rabbit), enhancing data security and mitigating the risk of unauthorized data access to government research on nuclear simulations and climate change studies.

**Personal Projects**

**Auction Server and Client** – Java, JavaFX, MongoDB April 2023 – May 2023

* Developed a multi-user bidding system featuring a local server and client components, enabling simultaneous bidding by multiple users.
* Implemented real-time bid tracking by storing bid data and items on MongoDB, ensuring that every bid was displayed instantly on all connected clients.
* Designed and created a visually appealing custom login screen and user-friendly graphical user interface (GUI) for each client, enhancing the overall user experience.

**Yerraballi vs Valvano**– *C, Assembly* Jan 2022 – May 2022

* Developed a responsive two-player turn-based game utilizing C, Assembly, and hardware components, creating an engaging and interactive gaming experience.
* Designed and crafted custom sprites for characters and in-game objects using Aseprite, enhancing the visual appeal and uniqueness of the game.
* Implemented interrupt service routines with an EK-TM4C123GXL Microcontroller and sliding potentiometer to display the game on a wired LCD display, demonstrating hardware integration skills.

**Beat Maker**– *Python, Pygame* Aug 2022

* Developed an engaging and interactive beat maker with customizable options and user-friendly assistive buttons, enhancing the overall user experience.
* Integrated various WAV files and custom sound effects to create a dynamic and responsive musical experience, resulting in increased user engagement and creativity.
* Designed a captivating custom loading screen and an original logo using Adobe Illustrator, enhancing the user experience and engagement.

**Additional Information**

**Computer Skills:** TimescaleDB, Prometheus, Kubernetes, Kafka, Linux, PostgreSQL, Grafana, Docker, Python, Java, JavaScript, HTML5, C, C++, Golang, Flask, React, Heroku, Assembly, CSS, Redfish API, REST API, RHEL, OpenSearch, Logstash, CLI

**Languages:** Conversational in Korean

**Work Eligibility:** Eligible to work in the U.S. with no restrictions.