Kaung Khant Pyae Sone

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Skills & Technologies

- Comfortable languages: Python, JavaScript/HTML/CSS, JSX
- Familiar languages: Bash, C, C++, Java, SQL
- Frameworks & Tools: React, create-react-app, Node.js, Electron.js, Git, Visual Studio Code, Visual Studio, pipenv, matplotlib, pygame, pytest, OpenMP, MPI, Pthreads, VMWare Workstation Player/Pro, Proxmox, Wireshark, Ekahau Pro & Sidekick
- OSes: Windows, Linux (Debian-based: Ubuntu, Raspbian)
- Office tools: Microsoft Office, LibreOffice
- Networking & wireless basics
- Technical knowledge of computer hardware and components
- Performance measurement tools such as MSI Afterburner, Unigine Superposition
- Figma for interactive user interface prototypes

Projects & Experience

Personal Website – kkps.dev   May 2023 – June 2023

- Developed a personal website to inform visitors about myself and showcase my projects
- Used **React** with **JSX**, **HTML**, **CSS,** and **JavaScript** via create-react-app and developed several reusable components from buttons, cards, date selectors, and navbars to photo carousels, modals, and pages
- Deployed the website on GitHub pages with a custom domain

Senior Project, University of the Pacific   Jan 2023 – May 2023

- Collaborated with Bioengineering students to build an Arduino-based insole pressure sensor
- Programmed Arduino in **C++** to retrieve data from sensors and send it over Bluetooth LE
- Developed a **web-based app** capable of receiving this data over BLE and recording, playing back, visualizing, trimming, and saving the data to a .csv file
- Aided the study of an athlete's rate of force development by visualizing and making the data interactive

Git Simulator, University of the Pacific   Jan 2023 – May 2023

- Practiced Agile methodologies, specifically **Scrum**, by taking the role of a product manager in a team of four
- Kept track of tasks using **Zenhub**
- Simulated **Git** in **Python** with **pygame** and visualized the repository as a graph using **matplotlib**

Typing Tester, University of the Pacific   Jan 2023 – May 2023

- Practiced **Scrum** by taking the role of a developer in a team of four

- Worked with an acting customer to develop a product according to their needs
- Developed or helped develop many core functionalities of the typing tester in **Python** using **pygame**, including typing statistics, text rendering, and unit tests in **pytest**

Parallel Programming, University of the Pacific   **Jan 2023 – May 2023**
- Studied parallel programming concepts by writing programs in **C**
- Parallelized a program that computes two scalar vector products and one dot product using **MPI**
- Parallelized a vector rotation program using **OpenMP**
- Parallelized a program to generate a histogram using **Pthreads**
- Wrote helper scripts in **Python** to streamline timing data collection

Human-Computer Interface Design, University of the Pacific   **Jan 2023 – May 2023**
- Researched user needs and applied UI/UX concepts to develop a prototype in **Figma** for a time management/calendar application

Network CO-OP, Technical Support at Vocera   **May 2022 – Dec 2022**
- Created web dashboard displaying warehouse data using **Python**, **Bash** & **LibreOffice**
- Diagnosed DHCP issue between an access point and Vocera product using **Wireshark**
- Conducted wireless survey to evaluate Wi-Fi quality with **Ekahau Pro** & **Sidekick**
- Used **Microsoft Power Platform** & **Power BI** to visualize support team statistics and trial skill-based case routing system for feasibility research
- Cleaned and categorized device logs with **Python** to make it easier for support engineers to read

Expression Parser & Evaluator, University of the Pacific   **May 2022 – Dec 2022**
- Built mathematical expression parser and evaluator for a small imperative programming language in **Python**

Operating Systems, University of the Pacific   **Aug 2021 – Dec 2021**
- Studied multithreading, operating systems, and related concepts by writing programs in **C** with **Pthreads** on **Ubuntu**

Computer Systems & Networks, University of the Pacific   **Jan 2021 – May 2021**
- Studied basic networking protocols such as TCP/UDP by writing programs in **Python** that interact with these protocols
- Studied high-performance programming and optimization techniques by writing programs in **C**
- Wrote Sudoku game in **C** and then ported it to MIPS Assembly to understand how compilers work

Mario-like Game, University of the Pacific   **Aug 2020 – Dec 2020**
- Worked in a team of five to develop a Mario-like game in **Java** and the **ACM** library for graphics

- Developed or help develop many core functionalities of the game, such as physics, collision, input handling, level loading from Tiled tile maps, graphics, camera, and more

Dean's Seminar, University of the Pacific   **Aug 2019 – Dec 2019**
- Developed a static website in **HTML/CSS/JS** showcasing a photo gallery of the team of a group project and hosted it on GitHub Pages

Additional Experience & Rewards

Senior Project
- Received Recognition of Excellence in Engineering Design in Bioengineering

Personal projects
- Developed a Discord bot in **Node.js** with a **web** interface and hosted it on AWS EC2
- Experimented with Proxmox to host applications such as Plex locally
- Set up OpenVPN on AWS to forward Minecraft traffic from the local computer
- Built a gaming computer, optimized using MSI Afterburner and Ryzen Master
- Configured a Raspberry Pi to act as a network file server
- Created an ESP32-based Wi-Fi-controlled LED strip controlled by a **Node.js** server via MQTT

Education

B.Sc. in Computer Science at University of The Pacific   **Aug 2019 – May 2023**
Dean's Honor Roll: Fall 2021, Spring 2022 & 2023   **GPA: 3.80 –** *magna cum laude*
Relevant Coursework:

- Operating Systems
- Database Management Systems
- Computer Systems & Networks
- Digital Design
- Discrete Math for Computer Science
- Human-Computer Interface Design
- Programming Languages

- Computing Theory
- Algorithms
- Application Development
- Data Structures
- Intro. To Computer Science
- Software Engineering