Chan Yat Fu Jacky

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Education

The University of Hong Kong **Sept 2019 – Now**

BEng in Computer Engineering *CGPA 2.51*

- 2022-2023 Year GPA: 3.85 (12 courses)
- 2023-2024 Semester 1 GPA: 3.57
- Winner (Top 11 out of 136 projects) – Final Year Poject Poster Competition
- Finalist (Top 6) – Generative AI Hackathon for Social Good
- A+ in Operating Systems, Digital System Design, Probabilistic Systems Analysis

Buddhist Sin Tak College

Hong Kong Diploma of Secondary Education Examination

- DSE: 5* in English Speaking, 5 in English Writing
- IELTS (2019): 8.5 in Reading, 7.5 in Listening

Technical Skills

Language TypeScript, Python, Java, Bash Script
Backend Express.js, FastAPI, Node.js
Other Technologies PyTorch, Docker, GraphQL
Frontend Next.js, React, Solid.js, Svelte, Qt
Cloud & Databases AWS, Azure, SQL, MongoDB

Work Experience

Software Developer – Novbee **June 2023 – January 2024**

Part-time Software Developer *August 2023 – January 2024*

- Developed and maintained a dynamic website leveraging **Next.js**, **FastAPI**, **PostgreSQL**, and **GraphQL**.
- Conceived and executed the backend infrastructure and database schema for the company.

Software Developer Intern *June 2023 – August 2023*

- Engineered a Singing Voice Synthesis model utilizing **PyTorch**.
- Developed a user-friendly **React** website enhancing the company's digital presence.

DIgital Marketing and Data Analytics Intern – Homie Living **May 2022 – August 2022**

- Enhanced the open and click rates of email campaigns by 22% and 17% respectively.
- Optimized SEO strategy leading to **top 3 Google search rankings** for various keywords (4 ranked first, 4 ranked second, 2 ranked third).
- Devised a marketing campaign reaching thousands of audience members, resulting in daily sales figures exceeding $100K.

Individual Projects

React MIDI Editor: A versatile and customizable MIDI editor library. Source Code

- Implemented a practical **singing voice synthesizer** using this library as an illustration.
- Incorporated vital features such as **clipboard, undo/redo, and import/export**, along with lyric support for augmented functionality.
- Designed to be responsive and **mobile-friendly**, optimized to support rapid update of 1000+ notes at 60fps.
- Facilitates customization of styles and behaviors, aligning with user preferences.

Stay Hydrated: An interactive console-based application for tracking daily water consumption. Source Code

- **GUI**: Crafted using React and Ink **Database**: Utilized LokiJS for database management
- Configured to **run in the background**, estimates user's water intake and issues timely **notification reminders**.
- Embodied a **modern GUI** influenced by page routing, providing an improved UX while ensuring that the commands remain **easily accessible**.

ICMS: A comprehensive course management dashboard. Source Code

- Integrated a **facial recognition login component** for enhanced security.
- Delivers real-time course schedule and information depending on user's context and timing.
- Augmented interaction by enabling users to forward course-related information to their personal email accounts.

MuseDecode: An FPGA-based musical signal decoder.

- Conceived and implemented an audio signal to text decoder using Vivado and FPGA.
- Supports decoding of complex waveforms with a **high tolerance for noise** (SNR 12dB).
- Allows for **precise detection across a vast frequency spectrum** ranging from 400 - 5000 Hz.