DARYL ANG JIA JUN

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EDUCATION

National University of Singapore (NUS) **08/2020 – 07/2024**
Bachelor of Engineering (Electrical Engineering), Minor in Japanese Language

- Grade Point Average: 4.61 out of 5.00
- Courses: Calculus, Differential Equations, Linear Algebra, Digital Design, Microcontroller Programming and Interfacing, Electronic Circuits, Signals and Systems, Electromagnetics, Electrical Grids, Machine Learning, Signal Analytics, Image Processing and Analysis

Osaka University **04/2023 – 08/2023**
Osaka University Short-term Student Exchange Program (OUSSEP)

- Courses: Intelligence and Learning, Health Service and Medical care in Japan, Japan: Society and Ideology, Intro to Japanese law, Osaka in Modern Japanese Literature, Managing Innovation and Change
- Volunteered in Project HELP, mentoring Osaka University students for the IELTS exam. Taught two students and received a certificate of completion.

WORK EXPERIENCE

Kotozna Inc., Software Engineer [Tokyo, Japan] **08/2024 - Present**
Tech stack: Vue.js, Python, Go, MySQL, AWS

- CI/CD and DevOps Improvements: Implemented the uv package manager across multiple Python backend projects. Enhanced Bitbucket Pipelines with Snyk, Trivy, Bandit, Gitleaks, Mypy, Ruff, and Deptry for automated security, quality, and dependency checks.
- Codebase Modernization: Migrated legacy Vue 2 applications to Vue 3, transitioned a vector search database from FAISS/Redis to Pinecone, and upgraded AWS Lambda deployments from ZIP-based to Docker image-based functions.
- Frontend Development: Designed and developed a high-performance, multi-filter analytics dashboard for Kotozna TPG's admin panel, enabling visualization of user conversation data and trends. Utilized Chart.js for responsive, interactive bar, line, and pie charts.
- Backend Development: Built and maintained GraphQL APIs in Python to power the admin panel dashboard.
- Monitoring and Troubleshooting: Diagnosed and resolved production issues using AWS CloudWatch, BigQuery, Datadog, etc.

PROJECTS

Bachelors' Thesis: Design of a Data Efficient Cross-Corpus **08/2023 - 04/2024**
Speech Emotion Recognition System based on Deep Learning

- Trained and evaluated models on emotional speech datasets (TESS, SAVEE, RAVDESS, IEMOCAP) for cross-corpus emotion recognition.
- Studied and applied algorithms for generative/discriminative domain adaptation and generalization.
- Built neural networks using PyTorch, NumPy, Pandas, Librosa, Matplotlib, and Seaborn.

Software-Defined Radio and Analog Filter Design **08/2023 - 11/2023**

- Employed PlutoSDR, RTL-SDR, Analog Discovery 2, LTspice, and GNURadio to generate, transmit, and analyze signals under interference.
- Designed higher-order op-amp filters to suppress noise and achieve desired packet success rate (PSR).
- Transmit and receive two different message signals with Binary Frequency-Shifting Keying (BFSK) modulation using Time Division Multiple Access (TDMA).

LANGUAGES

- English: Native
- Japanese: Upper Intermediate–Advanced (JLPT N2); fluent in daily and professional communication
- Mandarin Chinese: Basic conversational level

SKILLS

Frontend

Vue.js (Typescript, Vite, Vue Router, Pinia, vue-i18n, Axios) ■■■■■□
Styling (Scoped CSS, Vuetify, Quasar) ■■■■□□
Testing (Testing Library, Cypress) ■■■□□□
Astro ■■■■□□
Learning: React, Svelte

Backend

Python (FastAPI, Flask, SQLAlchemy, GraphQL, asyncio) ■■■■■□
Go (Gin) ■■■□□□
Node.js, Express.js ■■■□□□
MySQL ■■■■■□

Infra

Docker, Docker Compose ■■■■□□
Bitbucket pipelines ■■■■□□
AWS (ECS, Lambda, SQS, SNS, RDS, ElastiCache, S3, SSM Parameter Store) ■■■□□□
Terraform ■■■□□□
Learning: Linux, Shell scripting

Others

Python frameworks – NumPy, Pandas, Matplotlib, PyTorch
Programming languages – C, ARM Assembly
Software – MATLAB, LTspice, LaTeX
Electrical Engineering & Hardware – Analog Discovery 2, RTL-SDR and PlutoSDR Software Defined Radio, Raspberry Pi 4, Raspberry Pi Pico, Arduino, STM32 discovery board, Basys 3 FPGA development board