Cheung Ka Fai

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EDUCATION

The University of Hong Kong Sep 2019 – Aug 2023
Bachelor of Arts and Science (Applied AI) *CGPA 3.38*
- Bronze award in the EEG & AI competition hosted by the Faculty of Education
- Explored machine learning concepts, deep learning architectures, and model selection methods
- Implemented various machine learning algorithms using Python with PyTorch

EXPERIENCE

AI Programmar Sep 2023 – Present
Castco Testing Centre Limited
- OCR with GCP and multi user in PyQt
- Smart watch app with real-time heart rate detection and http request, in Kotlin Jetpack Compose
- Object detection tool with CSD

AI Engineer Intern May 2022 – Aug 2022
PONS.ai
- Researched state-of-the-art generative AI model and other relevant techniques for transferring images into various styles
- Optimized AI pipeline with traditional algorithms and neural networks, reducing inference time on mobile devices by 2/3
- Contributed to the entire development cycle, including data collection, image preprocessing, and experimentation with different approaches using StyleGAN

PROJECTS

Lingua Ladder | *Flutter, AWS, MySQL, HTTP* Feb 2024 – Present
- Cross-platform word game by Flutter, available on Web and Google play store
- Puzzle update daily, results connected to AWS DynamoDB
- Constant updates based on user feedback and community
- improve exp by responsive UI, show animation and save progress, different modes of challenges

AI Phone Agent | *Python, Twilio, OpenAI, TTS, LangChain, Flask* Jan 2022 – May 2022
- Developed AI phone answering agent utilizing Natural Language Processing (NLP) techniques and Large Language Model (LLM)
- Capable of answering user queries and engaging in dynamic conversations, while ensuring seamless transcription and support for human-like voices in multiple languages
- Accelerated information retrieval and chat generation time to less than a second
- Effectively regulate the agent's behaviors and ensure up-to-date and accurate information delivery by designing an optimal prompt

Improving traning algorithms | *Research, Python, Pytorch* Sep 2022 – May 2023
- Researched novel optimization ideas to improve the generalization ability of Adam-like optimizers
- Conducted extensive reviews of latest improvements and their theoretical foundations on computer vision, which inspired our original improvements
- Carried out more than 100 experiments on various CNN architectures and optimizers to demonstrate the faster convergence and improved generalization ability of our optimizer

TECHNICAL SKILLS

Languages: Python, C/C++, Kotlin, Dart
Frameworks: Flutter, Jetpack Compose, Flask, Pytorch, PyQt
Developer Tools: Git, Google Cloud Platform, Amazon Web Services, Twilio, CloudFlare
Libraries: pandas, NumPy, Matplotlib, LangChain