

Walter Wang

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Professional Profile

Innovative AI Engineer with over two years of experience at IMAGR, specializing in developing advanced AI models for smart shopping carts, and currently contributing to cutting-edge health technology at OPUM. Proficient in end-to-end AI development, including data collection, preprocessing, model design, training, and deployment. Experienced in utilizing Large Language Models (LLMs) to build ReAct Agents, workflows, chatbots, and local knowledge bases for enhanced automation and decision-making. Skilled in leveraging techniques in computer vision, time-series analysis, and natural language processing (NLP) to deliver impactful solutions. Experienced in optimizing models for edge devices, developing iOS applications, and integrating AI into real-world systems. Adept at utilizing TensorFlow, PyTorch, EdgeTPU, Google Cloud, Docker, and Python, with a strong passion for adopting emerging technologies to solve complex problems.

Work Experience

Machine Learning Engineer & iOS Developer

OPUM

Responsibilities

- Designed and implemented an iOS application to collect and process real-time data from wearable sensors attached to patients' knees.
- Preprocessed and analyzed time-series sensor data (e.g., accelerometer, gyroscope) to train a Time Series Classification Model Using LSTM for activity classification.
- Deploy the trained model on iOS devices and provide real-time activity classification and show statistical reports.

Artificial Intelligence Engineer

Imagr

May 2022 – Now

Responsibilities

- Designed, implemented, and deployed Computer Vision models for smart shopping carts, focusing on Object Detection, Segmentation, and Classification.
- Participated in the full development lifecycle of Object Detection models, leveraging various architectures such as YOLO, SSD, and Faster R-CNN.
- Managed data collection and data annotation processes, setting up a local CVAT (Computer Vision Annotation Tool) service for efficient labeling.
 - Utilized trained models like YOLOv5 for auto-annotation to accelerate dataset preparation.
- Conducted data preprocessing, including debayer processing (for raw sensor data) and data augmentation techniques to enhance dataset quality.
- Redesigned model architectures to optimize for deployment on edge devices such as Google EdgeTPU, ensuring real-time performance.
 - Applied quantization techniques to reduce model size and improve inference speed while maintaining accuracy.
- Continuously improved models post-deployment by identifying performance gaps, collecting additional data, and retraining models for better accuracy.
- Implemented inference logic to enable Object Detection models to track moving objects based on trajectory using algorithms like SORT (Simple Online and Realtime Tracking).
- Used web crawling techniques to gather data from the internet for training models and extracting product descriptions to enhance model performance.
- Collaborated with cross-functional teams to drive innovation and deliver impactful solutions within project timelines.

Intern

Davanti Consultant

November 2021 – Feb 2022

Responsibilities

- Use the Salesforce System to develop a CRM for a Non-profit organization with their System transformation
- Automate Email sending process, membership management, digital transformation, data integration.
- Communicate with clients, gather requirements, customer showcase, implement features, testing, document.
- Agile way of working, good communication with colleagues, conflict resolution, best practices for deployment.

Graduate Teaching Assistant

University of Auckland

Mar 2021 - Nov 2021

Responsibilities

- Provide teaching support for CS719 Programming with Web Technologies (JavaScript, NodeJS, Database design, HTML & CSS, SQLite)
- Provide teaching support for CS718 Programming for Industry (Java)
- Prepare and conduct online live code demo sessions to explain complex concepts in an easy way to understand.

Skills

Programming Languages: Python, SwiftUI, Core ML
Frameworks and Tools: TensorFlow, PyTorch, Scikit-Learn, Git, Docker, SQL
Cloud Platforms: Google Cloud
Other: Agile methodologies, CRM development, Data integration

Education Summary

Auckland University
Master of Information Technology
With First Class Honours

Auckland University
Postgraduate Certificate in Information Technology
Best Student Award, 2020

South China Agricultural University
Bachelor of Industrial Engineering

Academic Reward and Certificate

AWS Certified Solutions Architect - Associate
Certificate of Outstanding Achievement (A+ in Data Mining and Machine Learning)
Certificate of Outstanding Achievement (A+ in Advanced Topics in Artificial Intelligence)
Course Certificate on Coursera (Deep Learning Specialist, Andrew Ng)

Reference

Konstantinos
Imagr
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