Kwok Hung Ho (John)

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Education

Master of Science, AI and Robotics Expected: Mar 2023 — La Jolla, CA
University of California, San Diego

Courses: Convex Optimization, Linear Algebra & Applications, Statistical Learning
Notable Projects: Particle & Kalman filter SLAM, Coordinate Descent on Lasso, EM-based Movie Reccomender

Bachelor of Science, Electrical Engineering Graduated: Jun 2021 — La Jolla, CA
University of California, San Diego

Courses: Analog Circuit Design, Integrated Circuit Design, Linear Control System Theory, C++ OOP
Notable Projects: IoT Iced Coffee Machine, Folded Cascode OTA Amplifier, Poker game with C++

Experience

3D Systems – San Diego, CA Jun 2022 – Sept 2022
Data Science Intern

- Created a web application with NextJS, NodeJS and Socket.io that can monitor the live statuses of print progress/material/temperature and download logs/build files for 3D printers remotely in our R&D bioprinting lab.
- Designed and implemented an autofocus class in C++ with OpenCV for all the 3D bioprinters, effectively reducing focusing time of the printers from more than 1 hour to less than 5 minutes.

Application Technology Company Limited – Science Park, Hong Kong Jun 2021 – Sept 2021
AI Specialist Intern

- Quantized deep learning models from TensorFlow to TFLite running on edge TPU cameras, improving inference speed from 5fps to 30fps.
- Trained a Face Detection + Facemask Classification model using ResNet and PyTorch, achieving a precision and recall of about 91% and improved the inference speed by 4x running on an NVIDIA Jetson TX2 using TensorRT.
- Leveraged a web crawler to gather data and trained a suitcase detection model with YOLOv4.
- Developed an anti-smuggling detection algorithm and alert system to be deployed at the Hong Kong International airport by pairing a pre-trained human tracking model with the suitcase model.

Risksis Technology Limited – Science Park, Hong Kong Mar 2021 – Jun 2021
Software Engineer Intern

- Wrote Python classes to retrieve paragraphs from PDF documents with Tesseract and analyzed them using Named-Entity Recognition and NLP models such as BERT and spaCy and storing the data in a MongoDB database.
- Created a SPA-application dashboard to query the database with VueJS and ASP.NET.

ASTRI – Science Park, Hong Kong. Jun 2019 – Sept 2019
Software Engineer Intern

- Developed an augmented reality application for the Microsoft HoloLens with Unity (C#) which allows the user to spawn objects via hand gestures on top of AR tags, allowing one to digitally view the layout of our autonomous warehouse.

Projects

CryptoTracker.fyi – Demo

- Created a website that tracks cryptocurrency prices and news. Allows users to sign in and personalize their dashboard with REST APIs and CRUD operations. Has authenticated routes with JWST, and session cookies. Built with MERN stack and hosted on a single SSL-secure AWS EC2 instance.

Text Summarizer – Demo

- Created a website that summarizes text using SpaCy, Django and NextJS. Hosted on Elastic Beanstalk and Vercel.

Programming Languages: Python, JavaScript, C++, C#, MATLAB, Bash.

Tools & Frameworks: Numpy, Pandas, Matplotlib, Grafana, Git, Docker, AWS, SQL, MongoDB Linux/Unix, Agile development.

Web development: ReactJS, NextJS, VueJS, SvelteJS, NodeJS, Django, ASP.NET, HTML, CSS.

Interests: NBA Basketball, Anime, Video games.