Philip Cho

Computer Vision / Machine Learning Engineer

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PROFILE

Machine Learning / Computer Vision (CV) Engineer working at OneCup AI, implementing and integrating various CV algorithms to the cloud based AI pipeline. Completed Visual Computing Master's Degree at SFU, as well as Bachelor of Commerce degree at Sauder School of Business. Combines a businessman acumen and the skills of a developer, possessing years of work experience in both fields.

WORK EXPERIENCE

Computer Vision Engineer (CO-OP) - (MAY/2021 - PRESENT)

ONECUP AI - VANCOUVER, BC
- Constructed AI model inference pipeline using NVIDIA DeepStream 6 and Triton Inference Server. Trained and integrated various deep learning models to DeepStream pipeline, such as:
    o Convolutional Neural Network (CNN) based object detector that detects animals and their body parts/tags
    o Recurrent Neural Network (RNN) and CNN based Optical Character Recognition (OCR) model that reads animal's ID tag attached in its ears, improving the effectiveness of the tracker built into DeepStream pipeline
    o HRNet and Transformer based pose estimation model that detects animal keypoints and classify their behaviors
- Solved annotation data shortage problems by creating synthetic data using game engines (Unreal Engine). Also enhanced the data to photorealistic quality using Generative Adversarial Network (GAN) based image-to-image transfer

CUSTOMER SUCCESS SPECIALIST - (DEC/2016 - FEB/2019)

WISHPOND - VANCOUVER, BC
- Provided marketing consultations to clients, as well as additional support via emails, online chats, webinars, and etc
- Analyzed customer satisfaction, shared the insights with management on recurring meetings
- Collaborated with the developers and performed QA procedures to track and fix bugs in the software
- Investigated and responded to all fraud and dispute claims by working with the cardholders and banks
- Produced tutorial contents and uploaded them on the FAQ page, YouTube channels, Twitter, and others

EDUCATION

MASTER OF COMPUTER SCIENCE - (SEP/2019 – OCT/2021)

SIMON FRASER UNIVERSITY (SFU) - VANCOUVER, BC
Specialized in Visual Computing within the Computer Science department, studying Computer Vision, Machine Learning, 3D modeling, AR/VR, and etc. Worked on various projects such as the following:
- Using GPT-2 Algorithm and thousands of previous conversations between doctors and patients, created a chatbot that automatically responds to patient's COVID-19 related inquiries. Deployed the model on a webapp using JS and Flask backend. Code link: https://github.com/chophilip21/doctor_chatbot
- Utilizing Health Canada's COVID-19 real time data API, created a full-stack forecast web app that processes the data with Apache Spark and visualizes the data with Chart.js. Also implemented univariate time series forecast feature based on the previous trend. Code link: https://github.com/chophilip21/covid_pyspark
- Constructed state-of-the-art fine-grained classification DL model that recognizes and precisely distinguishes 300+ classes or similar looking cars (and birds). The model dissects images into multiple scales of jigsaw patches, progressively learning various details hidden in the images, and further uses innovate loss function to reduce overconfidence of classifiers Code link: https://github.com/chophilip21/jigsaw_image_classification

BACHELOR OF COMMERCE - (2011 - 2016)

UNIVERSITY OF BRITISH COLUMBIA (UBC) - VANCOUVER, BC
Graduated from UBC'S Sauder School of Business with a double major in Marketing and International Business (IB).

SKILLS

Python | DeepStream | Pytorch | TF/Keras | AWS EC2/S3 | C++ | React | Flask/Django