



EDUCATION

Master of Professional Computer Science, Visual Computing at Simon Fraser University | BC Canada

Courses: Distributed and Cloud Systems, Machine Learning, Image Processing, Computer Vision

Honors Bachelor of Science in Computer Science at University of Victoria | BC Canada

Courses: Artificial Intelligence, Data Mining, Analysis of Algorithms, Operating Systems, Computer Architecture, Software Engineering, Programming Languages

HIGHLIGHTED PROJECTS

Made and Deployed Three Microservices in Cloud

Abstract: Using Docker, Kubernetes and istio, deployed three microservices on AWS. Observed and analyzed the distributed system in Grafana, Gatling loading, Kiali and Prometheus.

- Deployed service mesh of 3 microservices in Amazon's managed Kubernetes service for EC2
- Successfully used Gatling to deploy loads of requests on this distributed system
- Used Kiali to visualize the service mesh; used K9s to manage service nodes; used Grafana to observe request's run chart.
- Wrote a team report and provided a video that explains the system details.

Reinforcement Learning of Biomechanical Footsteps

Abstract: reinforcement learning with ml-agents in Unity to implement the footstep system from academic paper.

- Successfully implemented a biomechanic footsteps agent described in academic paper from scratch
- Successfully deployed reinforcement learning on the footsteps agent with outcomes that the agent learned to walk towards goal and in a maze with novel biomechanic footsteps.
- Discovered and adopted "field of view" functionality for the agent with inspiration from Internet.
- Utilized ML-agent, C# and Unity
- Read and understood the academic paper and wrote a technical report
- Honor BSc capstone project with A grade on final presentation

Transfer Learning of StyleGAN3 for Generating Pig Faces

Abstract: training of StyleGAN3 on remote server to enable transfer learning from human face to pig faces

- Successfully trained the model that generates non-pre-existent pig faces images with good quality, which will help the company gain numerous new pig-face data for future machine learning purpose
- Successfully utilized AWS EC2 and the company's Linux server for the transfer learning
- Made a random-livestock-face-generation web application to generate pig face at clicking of button

- Made and expanded a good-quality dataset of pig face images
- Read and understood StyleGAN3's academic paper

3D Bounding Box Detection on Vehicles with DD3D network

Abstract: the goal is to understand the position and pose of each vehicle in the scene with respect to the ego car. DD3D is a novel 3D bounding box detection network that abandons the Lidar's depth information

- Successfully made the DD3D network adopt a different dataset format and train with the new dataset
- Made a new dataset from videos into 200 images with 4 categories of vehicles labelled
- Researched and compared labelling tools on the Internet. Learned and used the CVAT labelling tool
- Researched and generated standardization document for labelling standard, labelling process and model evaluation
- Read and Understood DD3D's academic paper, and wrote a technical report with LaTeX.

SKILLS

- **Python, C#, Java, C**
- Distributed System, Cloud, AWS EC2, EKS
- SQL query, Database
- Machine Learning in Visual Computing
- Scikit-learn, PyTorch, Neural Networks, SVM
- Computer Vision, Image Processing
- Programs and Tools: Unity 3D, Git, Shell, SQL
- Web Programming: HTML, CSS, JavaScript

OTHER LINKS

freeCodeCamp: https://www.freecodecamp.org/percy_jia | Oct. 2019-Dec. 2019

- Completed the Responsive Web Design Developer Certification

HackerRank: <https://www.hackerrank.com/percy6995>

- Problem Solving/Java

Work Experience

Cashier | Stadacona Market, Victoria BC | Dec. 2017-Feb. 2017

Coffee Shop Clerk | BeanThere at Student Union Building, University of Victoria | Jan. 2017-Apr. 2017