Flora Huo

Junior Software Engineer

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Junior software engineer with 2 years of experience in software engineering field. Possesses demonstrable knowledge of data pipeline for machine learning models, AI research and analysis.

RELEVANT WORK EXPERIENCE

UBC Collaborative Advanced Robotics and Intelligent Systems Lab, Vancouver, BC
Undergraduate Research Assistant
Jan 2023 – Apr 2023

- Used C# to design a manipulation framework for controlling KUKA LBR iiwa arm in augmented/mixed reality using Microsoft Hololens 2.

Kindred AI (Ocado Intelligent Automation), Toronto, ON
AI Engineering Intern
May 2022 – Jan 2023

- Implemented a Python script that allows human teleoperation using Vive Pro 2 on a Universal Robot arm attached with a Robotiq gripper through SenceAct.
- Implemented an expert data collection pipeline and **behavioral cloning training pipeline** for a robotic manipulation task which involves *manipulating a robotic arm with a gripper to pick and place an item with Aruco marker to a target location* (Demo Presentation).
- A workshop paper on motion trajectory and the required number of datasets for ML reinforcement learning, in submission for **ICRA 2023**

UBC Motion Control and Character Animation Laboratory, Vancouver, BC
Undergraduate Research Assistant
Sep 2021 – Apr 2022

- Reinforcement learning research on PPO, DQN, and retargeting control policy, sim2real.
- Implemented and trained a policy in Pybullet for robotics arm pick-and-place actions which aims to achieve robust behaviors when dealing with unknown environments in real time. (See Report)

Kindred AI (Ocado Intelligent Automation), Toronto, ON
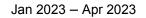*AI Engineering Intern*
Jul 2021 – Dec 2021

- Implemented reinforcement learning model to train robot behaviors in simulation with Haddington Dynamics Dexter HDI.
- Model tuning and optimization.
- Researched methods of combining reinforcement learning and control theory (impedance control).

Ericsson, Beijing, CN
R&D Machine Learning Intern
May 2020 – Sep 2020

- Data mining, neural network optimization, and sequence data training using OSS TensorFlow framework (Keras).
- Deployment in Docker, CI/CD, assisted mentor in MLOps.

EDUCATION

University of British Columbia, Vancouver, BC
BS — Cognitive Systems (Computer Science and Cognitive Psychology)
Sep 2018 – May 2023

- [UBC International Community Achievement Award (2021)](#) recipient

VOLUNTEER

Women In Robotics   June 2023 – Now
Vancouver Chapter Founder

PROJECTS

- PolyAI CodeML Hackathon (Top 5) - 2020 November
  https://github.com/flora992/Animal_and_Objects_classification_10 - An object and animal 10 category image classification project designed and trained under 24 hrs.
- UBC Open Robotics- Autonomous Server Robot - Responsible for unit and integration testing in Python, implemented supervised learning using ROS, applied transfer learning in Linux GPU deployment.

SKILLS

Technical Skills: Git, Python, R, MySQL, MongoDB, Django, MLOps, CI/CD, ROS 2, Pybullet, Reinforcement Learning, Robotic Control, Deep Learning, Data processing, ETL Pipeline, Supervised Learning, Transfer Learning, Keras, Tensorflow, Numpy, scikit-learn, OpenCV, SciPy,
Proficient in using Linux OS, Google Cloud Associate Cloud Engineer Candidate

Languages: English (Fluent), Mandarin (Native), Swedish (Basic)