ADARSH SRIVASTAVA

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OBJECTIVE

Looking for research roles at the intersection of machine learning and robotics. I have experience in modelling problems with deep learning, generative models, and currently conducting research on efficient robotic planning with diffusion models. Previously, I have worked in a team building & maintaining critical web scale services at PayPal.

EDUCATION

National University of Singapore — Singapore
Master of Computing, Artificial Intelligence Specialization (with Dissertation) — Aug 2022 – Dec 2023

– Relevant Courses: Neural Networks, Intelligent Robots, Uncertainty Modelling in AI, Trustworthy Machine Learning, AI Planning & Decision Making, Knowledge Discovery & Data Mining.

Birla Institute of Technology & Science, Pilani — India
B.E. (Hons.), Computer Science — Jul 2014 – Jul 2018

– Relevant Courses: Artificial Intelligence, Machine Learning, Cloud Computing.

RESEARCH EXPERIENCE

Collaborative, Learning, & Adaptive Robots Lab, National University of Singapore — Singapore
Graduate Student Researcher (Ongoing thesis undertaken as part of the Master's program) — Jan 2023 – Dec 2023

– Proposed the direction of `generative models in robotics`, undertook literature surveys, came up with potential research ideas, and evaluated them based on their technical merit and feasibility.

– Building baselines and benchmarks across skills for robotic task planning using diffusion models, testing applicability and comparing performance with other works. (Ongoing work)

TECHNICAL SKILLS

Proficient: Python, PyTorch, numpy, scikit-Learn, C++, Java, Spring, Hibernate

Familiar: OpenAI gym, ROS 2

WORK EXPERIENCE

Paypal Inc. — Bengaluru, India
Software Engineer II, Growth Markets Team — Jul 2018 – Aug 2021

– Led the design, development, and rollout of 3DS2.0 integration to Paypal Japan's unbranded checkout, helping the merchants reduce fraud related losses of around $500K USD a year.

– Designed & executed end-to-end changes for batch processing of card attribute (BIN) files for Rupay card scheme, enabling almost 500M Indian Rupay cardholders to transact on Paypal.

PROJECTS

Autonomous Vehicle Navigation in Duckietown — CS5478 Intelligent Robots | NUS
Python, PyTorch, OpenAI gym, Duckietown Simulator — March 2023

– Trained a *Duckie* to autonomously navigate the *Duckietown* roads with a *coarse* GPS and a map to approach a goal building as closely as possible.

– Used A* for path planning, PID for turn & velocity control, imitation learning + RL to train the *Duckie* to navigate the lanes and turns, and object detection to identify the goal building.

Reddit Posts Flair Prediction. — CS5242 Neural Networks | NUS
Python, PyTorch — November 2022

– Trained `GRU` and `LSTM` networks on `BERT` embeddings of reddit text posts, to classify the posts into one of the possible *flairs* given a *subreddit*.

– Performed zero-shot classification using `DistilBERT` for the same task, achieving a 75% accuracy for semantically titled flairs.