Anand Jain

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EDUCATION University of Chicago B.S., Computer Science.

Expected Jun, 2021

Santa Clara High School

2017

SKILLS

Languages Python, Julia, C, Bash

Packages PyTorch, Gym, TensorFlow $\geq v2$, Sklearn, Pandas

Spoken Languages English - Fluent, Hindi, Spanish, Chinese - Classroom

EXPERIENCE

Fermilab LSST Intern

Jun 24 - Aug 31

- •Researched the applications of neural differential equations to astronomy
- •Used the PLAsTiCC Astronomical Kaggle dataset to train a neural network to approximate the differential equation of different astronomical objects' light curves
- •Worked with peers and mentors to create a high level API for fast prototyping and ensemble training of neural networks for astronomy datasets, primarily in PyTorch
 - Technology/Tools: TorchDiffEq, DifferentialEquations.jl, PyTorch, Tensor-Flow, Matplotlib, Astropy

PROJECTS

Sips: Odds Tracking on GCP

Oct 2018 - Now

- •Built a python package that tracks sports statistics and odds
- •Learned about cloud deployment by spinning up free-tier VMs on GCP
- •Have collected over 1 GBs of live odds data from football, basketball and hockey
- •Long-Short Term Memory (LSTM) classifer for directional movement of moneyline
 - Technology/Tools: Python, Requests, Beautiful Soup, PyTorch
 - Link: github.com/anandijain/sips

Gym-Sips: RL Gym Environment

Feb 2019 - Now

- •Created a set of custom reinforcement learning environments using the OpenAI Gym package for the output of Sips
- •Attempted to use a Deep-Q network to learn a state value function.
- •Goal: I'd like to update my envs to be compatible with TF-agents and run the different algorithms supported and see if the agent learns any better
 - Technology/Tools: Python, Gym, PyTorch
 - Link: github.com/anandijain/gym-sips

COURSES

ACTIVITIES

UCQuantum

Aug 2019 - Now

- $\bullet \text{Unofficial club}$ applying to become an official RSO for UChicago undergrads interested in quantum computing
- •We have 50 facebook group members and roughly 15 active members
- •Initial meetings have been learning/teaching the basics: superposition, entanglement, quantum logic gates, unitary matrices, and superdense coding
- •We are planning to host talks, hackathons, and lab tours with faculty on campus