Anand Jain

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

Expected Jun 2021

Santa Clara High School

2017

COURSES

SKILLS

Languages: Python, Julia, Go, Bash, C/C++

Packages: PyTorch, Gym, TensorFlow, Scikit-Learn, Pandas, Flask

Spoken: Fluent English. Classroom Hindi and Spanish

EXPERIENCE

Fermilab - LSST Machine Learning Intern

Jun - Aug 2019

•Researched the applications of neural differential equations in astronomy for the Large Synoptic Survey Telescope (LSST)

- •Used the PLAsTiCC Astronomical Kaggle dataset to train a neural network to approximate the differential equation of different astronomical objects' light curves (brightness over time)
- •Presented poster of my work on Neural-ODEs at 2019 LSST Conference in Arizona
- •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
 - Tools: TorchDiffEq, DifferentialEquations.jl, PyTorch, TensorFlow, Matplotlib, Astropy, Python, Julia

PROJECTS

Sips: Sports Data Tool on Google Cloud

Oct 2018 - Now

- •Created Python package to track odds and statistics for a variety of sports
- Have collected over 1 GBs of data using Linux virtual machines on Google Cloud
- •Trained TensorFlow win/loss classification and LSTM time-series prediction neural network models on Sips data
- •Wrote Flask app to visualize odds using Matplotlib
 - Tools: Python, Requests, Beautiful Soup, TensorFlow, Flask, Matplotlib
 - Link: github.com/anandijain/sips

Gym-Sips: Reinforcement Learning Environment

Feb 2019 - Now

- $\bullet \textsc{Custom}$ reinforcement learning environments using the OpenAI Gym package for the output data of sips
- •Agent takes actions to buy the home team or the away team moneyline, and receives reward at the end of the game
- $\bullet \mathbf{Agent}$ learns risk mitigating hedging strategies
 - Tools: Python, Gym, TensorFlow, TF-Agents
 - Link: github.com/anandijain/gym-sips

ACTIVITIES

UCQuantum (.org) - Founder/President

Aug 2019 - Now

- •Unofficial club applying to become an official RSO for UChicago undergrads interested in quantum computing
- •We have 50 Facebook group members and 10 active members
- •We are planning to host talks, hackathons, and lab tours with faculty on campus