Anand Jain

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EDUCATION

University of Chicago *B.S.*, Computer Science. **Expected Jun 2021**
Santa Clara High School **2017**

COURSES

•Algorithms •Discrete Math •Abstract Linear Algebra •Mathematical Logic •Inventing Interactive Devices •Electronics •Computer Systems

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**
•Attempting to deploy data scrapers that gather information about sports and the odds market, feed this data into different neural network architectures and evaluate model performance.
•Using Linux VMs on Google Cloud, I run Python scripts to track REST APIs for odds and sports statistics websites with BeautifulSoup
•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**
•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
•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