# **Anand Jain**

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**EDUCATION** University of Chicago B.S., Computer Science. Expected Jun, 2021 2017

Santa Clara High School

**SKILLS** 

Languages Python, Elm, Bash, Julia, C

**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.il, 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) classifier 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

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

# ACTIVITIES

# **UCQuantum**

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 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