Aryaman Jeendgar

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Graduate Technical Intern at Intel Labs
and Student Developer at CVXPY

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A Third-year undergraduate from BITS Pilani, double majoring in Physics and Electronics and Communications Engineering with a keen interest in mathematically-driven research and engineering robust ML systems.
Personal webpage: https://aryamanjeendgar.github.io/

Education

Masters in Physics and Bachelors of Engineering in Electronics and Communications Engineering, *Birla Institute of Technology and Science* AUG 2019 — PRESENT

Skills

Tools and Languages	Python, C++, Numpy, scikit-learn, Pytorch, Git, emacs, LaTeX
Research Interests	Convex Optimization, Statistical Learning Theory, Deep Learning Theory, Online Optimization, Reinforcement Learning, Causal Inference, Bayesian analysis

Past Research/Intern(s)

Graduate Technical Intern **JUNE 2022 — PRESENT**
Intel Labs *Bangalore, Karnataka*

- Interning in the *Cloud Systems Research Lab*
- Working on Scaling-Out the VDMS database
- Researching the use of online algorithms for speeding up Nearest-Neighbor search queries in the distributed setting

Student Developer @ CVXPY **MAY 2022 — PRESENT**
Google Summer of Code *Remote*

- Implementing a series of powerful approximation methods for Relative-Entropy Conic constraints which were suggested in this paper within CVXPY
- When finished, would be one of the first (efficient) implementations of these constraints within a mainstream convex modelling language

LogGENE: A smooth alternative to the check loss **AUG 2021 — FEB 2022**
BITS Pilani *Goa Campus, Dept. of CS*

Code, *Pre-Print*, *Currently under review in IEEE TNNLS*
Under Prof. Snehanshu Saha & Mr. Soma S. Dhavala

- Developed a novel Quantile Regression based framework around our proposed loss function in the Deep Learning setting
- Offered applications to higher-order methods leveraging the above theoretical framework, suggesting a possible interplay between quantiles and higher-order analysis in neural networks
- Rigorously adapted our proposed regression loss to the binary classification setting, and saw favourable results against baseline (binary) Cross-Entropy.
- Used the Gene Expression problem as as test-bed for validating our theory
- End-to-end planned and wrote the code for most of the experiments that we conducted (used PyTorch as our major driver), and contributed significantly to the theoretical framework and proofs.

NLP intern @ Swecha **MAY 2021 — JULY 2021**
Swecha *Gachibowli, Telangana*
Code

- Worked on a Fake News Detection system for the Indian Context
- Partially constructed a fake news dataset for the same by scraping large volumes of data from relevantly tagged websites
- Dealt with Apache Solr and used it's inverted index search for creating a fast search solution for the system.
- Came up with and implemented a heuristic-based NLP system for fake news detection.

Miscellaneous

- Have written reviews under a professor for papers pushed to **ICLR '22** and **ICML '22**