Karan Kinariwala

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ACADEMIC BACKGROUND

Master of Science in Physics June 2019 - June 2021
St Joseph's College (Autonomous), Bangalore, Karnataka

- GPA: 7.6 / 10
- Large emphasis on programming and numerical simulations using Python and Maxima.
- Four-semester master's in physics with an equal balance of theoretical, computational, and experimental concepts.

Bachelor of Science in Physics, Chemistry, and Mathematics June 2016 - June 2019
St Joseph's College (Autonomous), Bangalore, Karnataka

- GPA: 7.0 / 10
- Six-semester triple major bachelor's course in Physics, Chemistry, and Mathematics.
- Attained a certificate in Data Analytics and Statistics.

PROJECTS

Modeling of the diffuse UV background around Messier 8

- A research project conducted under the guidance of Dr. Jayant Murthy from the Indian Institute of Astrophysics which was also a requirement for my master's degree.
- Modeled the dust distribution around Messier 8 to understand star formation in dense, hot hydrogen clouds using data from the HIPPARCOS, Gaia, and GALEX catalogs along with models developed by Castelli and Kurucz, Green et al 2019 and Draine.

Pose detection and classification

- Used Tensorflow's posenet model along with a custom dense neural network to help doctors assess geriatric disabilities on video.
- Also used Flask to develop an API for a layer of abstraction to perform model inference.

EXTRA COURSES

2022 Qiskit Global Summer School on Quantum Simulations June 2022

- Grade: 100 / 100

Curves and Surfaces: Geometry and Physics Applications - International Center for Theoretical Sciences (ICTS) May 2022 - June 2022

- A month-long in-person course on topology at ICTS, Bangalore.

2021 Qiskit Global Summer School on Quantum Machine Learning June 2021

- Grade: 78.26 / 100
- Certificate of Quantum Excellence, Quantum Computing, and Quantum Machine Learning

Deep Learning Specialisation - Coursera

- Specialisation of five courses: Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Structuring Machine Learning Projects, Convolutional Neural Networks, and Sequence Models.

Data 8.1X, 8.2X, 8.3X: Foundations of Data Science - edX

- 8.3X: Prediction and Machine Learning
- 8.2X: Inferential Thinking and Resampling
- 8.1X: Computational Thinking in Python

SKILLS

- Python - Numpy, Pandas, Scikit-Learn, Matplotlib, Seaborn, Plotly, Tensorflow, Keras, PyTorch, Flask.
- Julia
- Qiskit
- C
- Computational Software - Maxima, Scilab, GDL / IDL (Interactive Data Language)
- SQL
- Math - Linear Algebra, Statistics, Calculus, Abstract Algebra, Complex Analysis