

Karan Kinariwala

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ACADEMIC BACKGROUND	<i>Master of Science in Physics</i>	June 2019 - June 2021
	<i>St Joseph's College (Autonomous)</i> , Bangalore, Karnataka <ul style="list-style-type: none">• GPA: 7.6 / 10• Thesis: Modeling the diffuse UV background around Messier 8• 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.	
	<i>Bachelor of Science in Physics, Chemistry, and Mathematics</i>	June 2016 - June 2019
	<i>St Joseph's College (Autonomous)</i> , Bangalore, Karnataka <ul style="list-style-type: none">• 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	<i>Modeling of the diffuse UV background around Messier 8</i> <ul style="list-style-type: none">• 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.• Currently, I am in the process of writing a research paper for this project.	
	<i>Pose detection and classification</i> <ul style="list-style-type: none">• 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.• Link to GitHub Repository	
EMPLOYMENT HISTORY	<i>Intern - Machine Learning</i>	August 2021 - January 2022
	<i>Juxt Smartmandate Pvt Ltd</i> , Bangalore, India <ul style="list-style-type: none">• Developed a pose detection and classification model in Tensorflow for assessing geriatric disabilities on video.• Link to GitHub Repository	
	<i>Student Vice President, Physeeksee</i>	June 2020 - June 2021
	<i>St Joseph's College (Autonomous)</i> , Bangalore, Karnataka	

- Physeeksee is the post - graduate physics students association.
- Led the Physeeksee team in organising student, faculty and external talks, events and

Intern - IoT and Analytics

May 2017 - June 2017

trakRYT PTE LTD, Singapore and Malaysia

- Mapping and configuration of IoT devices at the MCVE (Malaysian Commercial Vehicles Exhibition) in Kuala Lumpur, Malaysia.
- Promoting the exhibition app to visitors.
- Analysis of data of visitor behaviour collected at the exhibition such as footfall and behaviour analysis, heat map and footfall insights.

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

June 2020 - November 2020

- 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

May 2018 - October 2018

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

SKILLS

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