SHREYAS KALVANKAR

⚲ Nashik, Maharashta, India

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EDUCATION

Bachelor of Engineering (Computer Engineering)   *2017 - 2021*
K.K. Wagh Institute of Engineering   Overall GPA: 9.67/10
Education & Research, Nashik

Higher Secondary Certificate   *2017*
HPT Arts & RYK Science College, Nashik   Percentage: 87.07%

TECHNICAL STRENGTHS

Computer Languages	C/C++, Python, Java
Web Development	AngularJS, Typescript
Deep Learning Frameworks	Keras, TensorFlow
Machine Learning Frameworks	Octave, Sci-kit
Embedded Systems	Arduino, RaspberryPi, Teensy
Version Control	Git, GitHub

EXPERIENCE

FinIQ Consulting India Pvt. Ltd.   May 2020 - June 2020
Software Development Intern

· Developed a front-end using AngularJS for forex trading with interactive visualization and chatbot service, providing an appealing platform for forex operations
· Studied OLAP and data cubes for business intelligence on new company products to increase sales
· Studied technical analysis of market indices and option chain (equity derivatives) for better pricing models
· Created a python module for stress testing CPU and memory as per user input using variable load calibration
· Documented relevant codes and procedure
· GitHub: CPU and Memory Stressing module & Forex Trading Platform

PUBLICATIONS

Shreyas Bapat et al. *EinsteinPy: A Community Python Package for General Relativity.* 2020.
arXiv: 2005.11288 [gr-qc].

Shreyas Kalvankar et al. *Galaxy Morphology Classification using EfficientNet Architectures.* 2020.
arXiv: 2005.13611 [cs.CV].

PROJECTS & RESEARCH

The Galaxy Zoo Project   August 2019 - September 2020

· A galaxy morphology classification project, based on Kaggle Galaxy Zoo 2 competition
· Developed a CNN for vote fraction predictions of 37 galaxy features from the Galaxy Zoo decision tree with an rmse score of **0.07765**, ranking us in the **top 3** on the public leaderboard
· Developed a CNN for classification of galaxies into 7 classes based on their morphologies with an accuracy of **93.7%** and an F1 score of **0.8857**

The EinsteinPy Project   March 2020 - April 2020

· Contributer to an open source community python package for general relativity
· Added Reissner–Nordström metric: a static solution to the Einstein-Maxwell field equations, into the code
· Corrections in the Kerr-Newman and Kerr metrics classes
· Added calculations of event horizon and ergosphere for a Kerr-Newman blackhole
· DOI: 10.5281/zenodo.4445219

Astronomical Image Colorization and Super-resolution using GANs   August 2020 - June 2021

· A project for efficiently colorizing and up scaling unused astronomical images that could be potentially used for astronomical studies
· Created a dataset for the underlying problem by scraping images off the Hubble archives
· Developed variations GAN architectures for colorizing images achieving visually pleasing results
· Implemented a variation of SRGAN architecture suitable for the data and obtained high resolution images

Miyazaki Art Cycle GAN   June 2020 - Present

· A cycle GAN project for producing animated images in Studio Ghibli art style
· Used conditional GANs in cyclic fashion to effectively produce anime style abstractions of real world photographs

Robocon   August 2018 - April 2019

· Assigned to build and code a quadruped robot and a wheeled robot with dynamic locomotive abilities for ABU Robocon 2019
· Two robots were created, one being an autonomous quadruped and the other a wheeled robot which had dynamic locomotive abilities