SHREYAS KALVANKAR

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EDUCATION

Bachelor of Engineering (Computer Engineering) *2017 - 2021*
K.K. Wagh Institute of Engineering Overall GPA: 9.58/10
Education & Research, Nashik

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

Secondary School Certificate *2015*
Boys' Town Public School, Nashik Percentage: 94.4%

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
Summer Intern

- Developed a front-end platform using AngularJS for forex trading with history charts, exchange rates and along with a news portal and chatbot service
- Studied and analysed data cubes and OLAP for business intelligence using company platforms
- Studied technical analysis of market indices and option chain (equity derivatives)
- 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 using deep learning
- Developed a CNN for vote fraction predictions of 37 galaxy features from the Galaxy Zoo decision tree with an rmse score of **0.07765** which ranked 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
- Corrections in the Kerr-Newman and Kerr metrics classes
- Added calculations of event horizon and ergosphere for a Kerr-Newman blackhole

Astronomical Image Colorization and Super-resolution using GANs August 2020 - Present

- Performed research on different techniques to colorize grayscale images and methods for super resolution of images
- Implemented a code in puppeteer to scrape the Hubble legacy archive
- Developed a prototype model for coloring images using GANs

Generative Adversarial Networks June 2020 - Present

- Developed a python code to scrape data off Wiki-Art
- Implemented a variation of DCGAN to generate images of art based on different input datasets
- Implemented a different variation of DCGAN to colorize grayscale images

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

Time series analysis and prediction March 2019

- A RNN that analyses and predicts time series viz, BTC/USD time series with an accuracy of **98%**
- Prediction of the COVID-19 epi-curve using active cases data

Natural Language Processing December 2019 - May 2020

- Created a RNN model and trained it over jokes dataset to generate jokes
- Created a RNN & LSTM network model and trained it over a poem dataset to generate poems
- Created and trained an ngram model and trained it over twitter data to generate tweets

RELEVANT COURSES

Core Courses
Data Structures and Algorithms
Computer Organization
Operating Systems
Theory of Computation
Database Management Systems

MOOC
Deep Learning
Machine Learning
Computer Vision
Tensorflow and Keras

Other Relevant Courses
Introduction to General Theory of Relativity
Linear Algebra
Mathematics for Machine Learning