Nithya **Shikarpur**

Learning Enthusiast
COMPUTER SCIENTIST, MUSICIAN
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Education

BITS Pilani, KK Birla Goa Campus   *CGPA: 8.46/10*
B.S. IN COMPUTER SCIENCE AND ENGINEERING   *August 2016 - January 2020*

Skills

Programming	Python, C/C++, JAVA, Javascript, HTML5/CSS
Libraries	Tensorflow, Keras, Pytorch, Scikit-learn, Matplotlib, Librosa, Essentia
Languages	English, Kannada, Hindi

Relevant Courses

Core Courses   Machine Learning, Neural Networks, Data Mining, Computer Networks, Operating Systems, Data Structures and Algorithms, Database Management Systems, Discrete Mathematics for Computer Science, Object Oriented Programming, Computer Programming

Other Courses   Probability and Statistics, Linear Algebra, Calculus, Statistical Inferences and Applications

Experience

Digital Audio Processing Lab, IIT Bombay   *Mumbai, India*
PROJECT RESEARCH ASSISSTANT [UNDER GUIDANCE OF DR. PREETI RAO]   *December 2020 - Present*

- **Finding unique representations for a raaga in the performance of Jasrangi Jugalbandis (Indian Classical Music)**
  - This work is aimed at solving two problems:
    1. Differentiating between two raagas sung in a Jasrangi Jugalbandi setting
    2. Check the differences between a raaga while sung individually or as a jugalbandi (together)
  - Working on collecting data from YouTube and other known datasets for Indian Classical Music
  - Working with audio processing libraries in Python such as Librosa and Essentia to process audio files and data computation and handling libraries such as Numpy and Pandas

Oneirix Labs   *Pune, India*
CONSULTANT   *August 2020 - December 2020*

- **Developing image matching techniques**
  - Worked on using various CNN architectures and transfer learning to match a sample image to a template image for class identification
  - Worked mostly with Keras and Tensorflow libraries

McAfee, India   *Bangalore, India*
RESEARCH INTERN [UNDER GUIDANCE OF DR. ABHISHEK TRIPATHI]   *July 2019 - May 2020*

- **Malware Detection On Partial Binary Files**
  - Converted binary files into images and used transfer learning and autoencoders for classification
  - Listed as an inventor in the Invention Disclosure - to be filed, for this project
- **Identification Of Malicious Network Traffic For IoT Devices**
  - Helped implement a system to process captured network packets and extract the required features. Packets were classified using machine learning based on these features
  - Resulting model has been implemented in McAfee products
  - This project contributed towards my undergraduate thesis [LINK]

CiSTUP, IISC, Bangalore
Bangalore, India

SUMMER INTERN [UNDER GUIDANCE OF DR. TARUN RAMBHA] *May 2019 - July 2019*

- **Analysis And Visualisation Of Bus Bunching**
    - Worked with GPS coordinates and ticketing data from BMTC buses
    - Worked on cleaning and processing large chunks of data
    - Implemented a visualisation of the bus data
    - Project is available at [LINK]

BITS, Goa
Goa, India

RESEARCH INTERN [UNDER GUIDANCE OF PROF. HEMANT RATHORE] *Jan 2018 - Nov 2018*

- **Detection Of Malignant APK Files Using Opcode Frequency And Permissions Granted**
    - Experimented with different clustering and classification algorithms

Headout
Bangalore, India

SOFTWARE DEVELOPMENT INTERN *May 2018 - July 2018*

- **Automation Of Inter-Company Reporting System**
    - Implemented a pipeline to pull data from various sources, process them, and send out daily metrics to employees of the company

Positions Of Responsibility

Computer Programming, BITS Goa
Goa, India

TEACHING ASSISTANT *January 2019 - May 2019*

- Aid in the teaching process, creation and evaluation of assignments in Computer Programming course aimed to teach freshers coding in C.

Music Society BITS Goa
Goa, India

CORE MEMBER *April 2018 - April 2019*

- Member of a team in charge of the Music Society, BITS Goa, a 40 member club of musicians
- Responsibilities include organising performances for the members inside and outside campus, communicating club's needs to the administration and handling finances of the clubs.

Extra-Curricular

Musician

VOCALIST

- Trained Hindustani Vocalist
- Won several competitions and scholarships as a part of a band and solo
- Loves exploring new genres of music and fiddling around with different instruments

Dancer

BHARATHANATYAM DANCER

- Performed at prestigious festivals and won prizes in national level competitions