

Nithya Shikarpur

snnithya.github.io | snnithya@gmail.com

EDUCATION

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE (BITS), PILANI

B.E. IN COMPUTER SCIENCE AND ENGINEERING

August 2016 - December 2019 |

Goa, India

CGPA: 8.49/10

LINKS

Homepage: snnithya.github.io

Github: [snnithya](https://github.com/snnithya)

LinkedIn: [snnithya](https://www.linkedin.com/in/snnithya)

YouTube: [Nithya Shikarpur](https://www.youtube.com/channel/UCNithyaShikarpur)

SKILLS

Machine Learning • Deep Learning • Data Mining • DBMS • Probability and Statistics • Statistical Inferences and Applications

PROGRAMMING

Python • C/C++ • Java • Javascript HTML5/CSS • \LaTeX

PYTHON LIBRARIES

Tensorflow • Keras • Pytorch • Scikit-Learn • Librosa • Matplotlib • Essentia

TEACHING/LEADERSHIP

TEACHING ASSISTANT, COMPUTER PROGRAMMING

BITS Goa

Helped with the teaching, creation and evaluation of assignments for the course.

CORE MEMBER, MUSIC SOCIETY

BITS Goa

In charge of a group of 40 musicians. Handled administrative tasks and organized performances for the members.

EXTRA-CURRICULARS

Music

Trained Hindustani vocalist. Self taught in other genres of music such as pop, jazz, R&B, blues.

DANCE

Trained Bharathanatyam dancer. Danced at many festivals and won prizes.

EXPERIENCE

DIGITAL AUDIO PROCESSING LAB, IIT BOMBAY | RESEARCH ASSISTANT

December 2020 - Present | Mumbai, India

Working with [Dr. Preeti Rao](#) on several MIR projects for Indian classical music.

- Worked on a computational analysis of melodic mode switching in raga performance. [Paper](#) presented at [ISMIR 2021](#) [2].
- Working with Dr. Preeti Rao and [Dr. Clayton Martin](#), Durham University to provide visualisation of specific audio examples in Indian classical music
- Working to develop a raga detection system using audio input with deep learning.

ONEIRIX LABS | CONSULTANT

August 2020 - December 2020 | Pune, India

Worked on developing image matching techniques with deep learning using models built from scratch and transfer learning.

MCAFEE | RESEARCH INTERN

July 2019 - May 2020 | Bangalore, India

Worked with [Dr. Abhishek Tripathi](#) to develop models for malware detection.

- Built 2 models for malware detection in IoT devices. Involved in the literature review, data collection and model creation process. Contributed towards my [undergraduate thesis](#).
- Helped develop a novel model for detection of malware in partially downloaded binary files. Listed as an inventor on the Invention disclosure filed for this project [1].

CISTUP, IISC | RESEARCH INTERN

May 2019 - July 2019 | Bangalore, India

Worked with [Dr. Tarun Rambha](#) on the analysis and visualisation of bus bunching using GPS and ticketing data collected by BMTC buses in Bangalore. Work is available [here](#).

BITS PILANI, GOA | RESEARCH INTERN

Jan 2018 - May 2019 | Goa, India

Worked with [Prof. Hemant Rathore](#) on detecting malignant APK files using opcode frequency and permissions granted. Experimented with various ML classification and clustering techniques.

HEADOUT | SOFTWARE DEVELOPMENT INTERN

May 2018 - July 2018 | Bangalore, India

Automated intra-company reporting system for employees. Used APIs to access employee metrics along with Javascript and Python to process and send out reports automatically on a daily basis.

PUBLICATIONS & PATENTS

- [1] Named inventor on pending patent application (not yet published).
- [2] N. Shikarpur, A. Keskar, and P. Rao. Computational analysis of melodic mode switching in raga performance. In *Proc. of the 22nd Int. Soc. for Music Information Retrieval Conference*, 2021.