

Pranav Natekar

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EDUCATION

**VISHWAKARMA
INSTITUTE OF
INFORMATION TECHNOLOGY**
BE IN ELECTRONICS AND
TELECOMMUNICATION
May 2019 | Pune, India
Cum. GPA: 6.99 / 10.0

LINKS

Github:// pranav6670
LinkedIn:// pranavNatekar
Medium:// @pranavnatekar
Twitter:// @pranavnatekar24

COURSEWORK

UNDERGRADUATE

Signals and Systems
Data Structures and Algorithms
Object Oriented Programming
System Programming
Operating Systems
Digital Signal Processing + Practicum
Digital Image Processing + Practicum
Artificial Intelligence
Machine Learning + Practicum
(Delivered a lecture at a workshop titled "ML with Python")
Fundamentals of Deep Learning
for Computer Vision(Nvidia's DLI)

COMPETENCIES

PROGRAMMING

- Python • C • C++
- Embedded C • MATLAB

Familiar:

- Swift(iOS) • Kotlin(Android)
- Kubernetes • Docker

Tools:

- LaTeX • Git • MySQL

OPERATING SYSTEMS

- Linux/Unix
- macOS
- Windows

HARDWARE

Experienced with:

- Arduino • Raspberry Pi
- RF(Wi-Fi, Bluetooth, LoRa, nRF24)

EXPERIENCE

VISHAY INTERTECHNOLOGY, INC. | R AND D INTERN

Nov 2017 - Dec 2017 | Pune, India

Observed manufacturing of PR, VR and Special fuse resistors, film capacitors. Manufacturing processes included-Inspection, Sorting, BTU firing, Pulse testing, Lacquering, Sputtering, etc. Testing involved Pulse-Testing, 3rd harmonic testing, Surge testing which was helpful to profile performance of different types of resistors and capacitors.

PROJECTS

AUTOMATIC DETECTION AND CLASSIFICATION OF TABLA TAALAS FROM INDIAN CLASSICAL MUSIC | Aug 2018 - June 2019

- Developed a system that would be able to first detect a tabla taala from a mix(a song) of an Indian Classical Music and then classify the taala. For separation, HPSS (Harmonic Percussive Source Separation) was used and the separated Percussive component was used for classification. Models like CNN, LSTM were trained on a self-made dataset. A GUI was made to record a mix, separate and then classify the taala in real-time!

AUTONOMOUS VEHICLE DRIVE | Sept 2017 - June 2018

- Designed a vehicle from scratch and driven autonomously using an MLP. The car was driven wirelessly through the keyboard using nRF24 RF modules. The on-board camera live-streamed footage directly to the laptop via sockets. The camera would save the snap for a corresponding key-stroke, and this formed the training data. Alongside autonomous driving, the car would identify STOP signs and traffic signals.

IMAGE AUGMENTER | Oct 2019 - Dec 2019

- A GUI designed in PyQt5 for image augmentation leading to 1000+ images, when a single image is fed. The augmentations included affine transforms, morphological operations, convolving various filters, edge detection, etc.

EXTRA/CO-CURRICULARS

Type	Description
Technical	Led the communication team for Robocon'18 and team-member since 2017.
Cultural	Played Tabla at the musical team for Firodiya Karandak 2016.

AWARDS

Year	Event name, position	Fest name, College
2018	Witrified, 1 st	MindSpark'18, College of Engineering, Pune
2018	MicroApps, 3 rd	MindSpark'18, College of Engineering, Pune
2018	Impedance, 2 nd	Solutions'18, Army Institute of Technology, Pune
2018	Circuit Eye, 2 nd	Melange'18, Vishwakarma Institute of Technology, Pune
2017	Circuit Fixer 2, 3 rd	MindSpark'17, College of Engineering, Pune
2016	Won 2 nd place at intercollegiate variety show(Firodiya Karandak) at state level.	