

# Akanksha Kale

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## EDUCATION

### UNIVERSITY OF PUNE

#### B-ENG IN COMPUTER SCIENCE

June 2019 | Pune, India  
M.I.T College of Engineering  
Magna Cum Laude  
Cum. GPA: 8.37/10.00

### NOWROSJEE WADIA COLLEGE

#### MAJOR IN COMPUTER SCIENCE

May 2015 | Pune, India  
Top 1% in Class  
Cum. Percentage: 99.00%

## LINKS

Github:// [akankshaakale](#)  
LinkedIn:// [akankshaakale](#)

## COURSEWORK

### UNDERGRADUATE

Advanced Data Structures  
(Teaching Asst 2x)  
Computer Graphics + Practicum  
Machine Learning  
AI & Robotics + Practicum  
Human Computer Interface  
High Performance Computing  
Embedded Systems and IOT + Practicum  
Data Analytics  
Data Mining and Warehousing

## SKILLS

### PROGRAMMING

Over 5000 lines:  
Python • TensorFlow • OpenCV  
PyTorch • Java • Javascript  
MATLAB • Android • Arduino(C)  
Over 1000 lines:  
SpringBoot • C++ •  $\LaTeX$  • Shell  
Familiar:  
Angular • MySQL • Selenium  
Git • AWS • Jupyter • JIRA

## CONTACT

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## EXPERIENCE

### DELOITTE USI | FULL-STACK DEVELOPER - DC ANALYST

Jan 2020 - Present | Mumbai, India

- Working on **State of Michigan** Integrated Eligibility Project as a **developer**-wrote and reviewed code for JS using **Angular, Spring-boot, Shell**.
- Won an award amongst 1 in 500 folks for efficiently automating the framework and batches using **Shell, Maven, Ant** scripts

### PERSISTENT SYSTEMS | RESEARCH INTERN

Sep 2017- June 2018 | Pune, India

- Developed an obstacle detection-avoidance algorithm hosted on **NVIDIA Jetson TX2, ZED Stereo Camera**. The Reinforcement Learning algorithm was built using **OpenAI Gym, ROS**.
- Used Neural Network based **Q-Learning technique** to control action-states

June 2018- June 2019 | Pune, India

Developed a mind- controlled communication System for **Quadriplegic and Differently abled** individuals using 5-channel EEG headset,4-layer **LSTM** network for 'thought' data preprocessed using **Principal Component Analysis**

## RESEARCH

### M.I.T ROBOTICS LAB | HEAD OF COMPUTING

Jan 2016- April 2018 | Pune, IN

- Led the Development of Autonomous Robots, which learn from imagery inputs to plan robot trajectories in obstacle course for **ABU Robocon,Asia Pacific**.
- The 1<sup>st</sup> ever team in Robocon to achieve the task using Image Processing

## AWARDS

2020	1 in 500	Deloitte Spot Award for Automation
2019	National	KPIT Sparkle Innovation Challenge '19 Finalist
2019	3 <sup>rd</sup> /250	Smart India Hackthon 2019, IIT BHU
2018	International	Singapore India Hackathon, NTU Singapore - Runners Up
2018	1 <sup>st</sup> /150	Smart India Hackthon 2018, IIT BHU

## PROJECTS

### MONITORING PARKING SPACES | NTU, SINGAPORE

- Built a real-time system using Google GeoTagging, **HOG feature extraction, Faster R-CNN** for vehicle detection & made a **dynamic area-division algorithm**
- Eliminated the need of existing sensor-based systems by automating restructuring of grids & used **Audio QR** for authentication hence nullifying cost, saving configuration & scanning-time over RFID.
- Rewarded by **Prime Minister of India & Education Minister of Singapore**.

## PUBLICATIONS

### Patents

- A System and Method to Perform User Activity Using an Electroencephalogram  
**Application No. : 201921011129**
- A System and Method for Self-Adapting Virtual Structuring Of Unstructured Parking in Real-Time  
**Application No. : 201921051068**

### Papers

- P. Kamble, A.Kale, A.Relekar Recurrent Neural Networks on EEG based Classification for Brain Computer Interface. *International Journal of Advances in Electronics and Computer Science*,Sep.-2019 [\[link\]](#)