

Chetan Madan

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Education

Bharati Vidyapeeth's College of Engineering, Guru Gobind Singh Indraprastha University

B.TECH., COMPUTER SCIENCE AND ENGINEERING

New Delhi

2017 - 2021

Experience

Eckovation

SUBJECT MATTER EXPERT - MACHINE LEARNING

- Worked to help develop Unnayan system for smart education and classrooms
- Built an autonomous OMR sheet evaluation system without dedicated hardware

New Delhi

June 2019 - August 2019

Projects

Few Shot Accent Sensitive Voice Cloning using Generative Decoder

PERSONAL

January 2020 - Present

- Extracted embeddings corresponding to four human speech features: speaker voice features, speaker accent, emotions and context of speech using different encoder networks from mel-spectrogram of voiced audio samples
- Used VCTK, TIMIT and CMU Arctic datasets to train different encoders
- Used embeddings from the four encoders to generate mel-spectrogram corresponding to cloned voice using a generative decoder.
- Used triplet loss to train the generative decoder.

Do It Right

PERSONAL

November 2018 - February 2019

- Feedback system to detect if a user is performing an exercise properly.
- Detected keypoints on a user's body and calculated relative slopes.
- Compared relative slopes to calculate correctness of user's posture.
- Provided real-time feedback on mistakes in performance of any exercise.

Mountain Hike

PERSONAL

November 2018 - Present

- Driving assistant that gives a driver accurate picture of other cars in a radius of 200 metres
- Used the concept of indoor localization to vehicles
- Used deep neural network to suggest appropriate reaction based on surroundings of the vehicle

Parking Spot Detection

PERSONAL

August 2018 - September 2018

- System to detect available parking spaces in parking lots as well as authorized parallel parking using existing cameras
- Major challenges were: different camera angle, position, image quality, illumination and type of occlusion

Extracurricular Activity

Microsoft

MICROSOFT STUDENT PARTNER

September 2019 - Present

- Gained experience about new tools and frameworks for machine learning, robotics and electronics
- Held regular meetups with students to discuss and share knowledge on emerging technologies

Developer Student Clubs by Google Developers (DSC BVP)

HEAD, MACHINE LEARNING

May 2019 - Present

- Promoted technical education by taking workshops and sessions on machine learning.
- Held research discussions with students to discuss latest relevant research

Indian Society for Technical Education

ELECTRONIKA EXECUTIVE

September 2017 - October 2018

- Worked in a team to develop intelligent robotics solutions to common problems, such as guidance bot for visually impaired persons

Skills

Programming

Python, C/C++, MATLAB, Java, Embedded C

Deep learning

PyTorch, Tensorflow, Keras, Caffe

Robotics

Embedded Systems, Atmel AVR, Arduino, Raspberry Pi

Honors & Awards

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| 2020 | Winner , India Automation Games by International Society of Automation (ISA) - District 14 and MPSTME
Qualified for ISA-SAIT Automation Games, Canada | Mumbai |
| 2020 | Invitee , Microsoft Asia Student Partner Summit 2020 and Imagine Cup Regional Finals , Singapore | Singapore |
| 2019 | Winner , Vihaan Hackathon by IEEE, DTU | Delhi |
| 2018-2019 | Semi Finalist , IICDC by Department of Science & Technology and Texas Instruments | |
| 2018 | Winner , UHack 3.0 Hackathon in USICT, Delhi | Delhi |