Shraddha Sharma

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AREAS OF INTEREST

Signal Processing, Speech Recognition, Artificial Intelligence

EDUCATION

Nanyang Technological University   **Singapore**
Master of Engineering in Robotics and Artificial Intelligence   *Jan 2018 - Jan 2020*
Overall GPA: 3.83/5.0

The LNM Institute of Information Technology   **Jaipur, India**
Bachelor of Technology in Electronics and Communication Engineering   *Aug 2012 - Jul 2016*
Overall GPA: 7.74/10.0

ACADEMIC PROJECTS

Nanyang Technological University   **Singapore**
Masters Project Title: Indian Classical Vocal Training Tool (Ongoing)   *Jan 2018 - Jan 2020*
- Designed and developed a vocal training tool for learning Indian Classical music.
- Implemented machine learning algorithms to provide detail analysis of user's vocal ability.
- Research work got accepted for Poster presentation at Women in Music Information Retrieval workshop, Paris.
- Paper published in 2nd International Conference on Intelligent Autonomous Systems(ICoIAS 2019), Singapore.
- Participated in Research Showcase 2018 at NTU, Singapore and presented poster of the research work.

The LNM Institute of Information Technology   **Jaipur, India**
B.Tech. Project Title: Wireless Transmission of Solar Power   *Aug 2015- May 2016*
- Devised a system for capturing solar power and calculated its efficiency.
- Generated a simulation model of the Antenna system for wireless transmission of Solar power.

WORK EXPERIENCE

SMRT Lab@NTU   **Singapore**
Research Engineer   *Jan 2020 - Present*
- Working on SMRT team project of signal classification.
- Developed an algorithm for data pre-processing and labelling of data.
- Classified different signals and identified the characteristics of interfering signal.
- Implemented unsupervised learning methods and statistical approach for data pre-processing.
- Implemented time-series analysis methods and feature extraction for data analysis.
- Implemented Supervised machine learning algorithm for future prediction of signal.

Internet of Things Lab@NTU   **Singapore**
Part-Time Project Officer   *Apr 2019 - Oct 2019*
- Worked on 2 team projects of human behaviour analysis.
- Extracted emotional features from the video data by applying "Affectiva Algorithm" and processed it to extract meaningful information.
- Labelled audio data and created a bash script to edit video data.
- Implemented time-series analysis on video data by calculating correlation between different emotions and created hypothesis to find collaboration.

Hacklab Innovations Pvt. Ltd.   **Bengaluru, India**
(Intern) Embedded Engineer   *Jul 2017 - Nov 2017*
- Worked on individual projects of embedded systems including indoor localization and asset tagging system.
- Calibrated water level sensor and plotted real time graph to display water level.
- Interfaced different sensors with MSP430-EXPF5529LP and implemented UART, SPI and I2C communication.

Applied Electronics   **Hathras, India**
Embedded Engineer   *Aug 2016 - Jun 2017*
- Worked closely with three engineers and Developed a device for Solar Monitoring System, using Python and Raspberry Pi.
- Aggregated data from multiple devices on central server and device communicates with the inverter's RS232 port.

TECHNICAL SKILLS

Computer Languages	Python, MATLAB, Bash(Shell scripting)
Hardware Platforms	Arduino, BeagleBone, Raspberry Pi
Electronics Tools	Microwind, Xilinx, VHDL
Misc Tools	LaTeX, Vim, Git

AWARDS AND ACHIEVEMENTS

ICoIAS Conference, NTU, Singapore   *28 Feb - 1st Mar 2019*
- Paper titled "Design and Development of Indian Classical Vocal Training Tool" accepted for publication and received best presentation award in 2nd International Conference on Intelligent Autonomous Systems(ICoIAS).

Singapore-India Hackathon, NTU, Singapore   *12-14 Nov 2018*
- Selected in top 10 teams of Singapore-India Hackathon.
- Developed a tool for Wayfinding and included features like Wi-Fi strength, QR code, Visual aid(Camera) and audio signature identifier for indoor tracking.

Poster Presentation, Paris, France   *28 Sep 2018*
- Research Work on Indian Classical Vocal Training tool selected for poster presentation in Women in Music Information Retrieval(WiMIR) workshop.
- Developed project on Discovering Emotion from Musical Segments in a team project session of WiMIR.

Open Source Initiative   *Apr 2017*
- Terminal Vocabulary Trainer for OSX and Linux.   github.com/shraddha-hna/wonder-word

Line Follower Robot, IIT Kharagpur, India   *Feb 2013*
- First Prize in Autonomous Line Follower Robotic Competition.
- Later, a PID-based implementation was done for Robo race in IIT Kharagpur (Kshitij 2013).

Co-Curricular Activities

- Winner of International Dance Championship in Singapore.
- Bollywood Dance Crew leader of NTUGSA group of NTU, Singapore.
- Event Organiser and emcee of Fresher's got talent and Karaoke Night in NTU, Singapore.
- Yellow belt holder in Karate and Sports Captain for Basketball and Kho Kho in School.
- Vocal Training in Hindustani Classical Music.
- Dance Competition winner for several consecutive years in school.