

Shraddha Sharma

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AREAS OF INTEREST

Signal Processing, Machine Learning, Artificial Intelligence

EDUCATION

Nanyang Technological University

Master of Engineering in Robotics and Artificial Intelligence

Overall GPA: 3.83/5.0

Singapore

Jan 2018 - Jan 2020

The LNM Institute of Information Technology

Bachelor of Technology in Electronics and Communication Engineering

Overall GPA: 7.74/10.0

Jaipur, India

Aug 2012 - Jun 2016

ACADEMIC PROJECTS

Nanyang Technological University

Masters Project Title: Indian Classical Vocal Training Tool

Singapore

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

B.Tech. Project Title: Wireless Transmission of Solar Power

Jaipur, India

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

Biofourmis Pvt. Ltd.

Senior Data Scientist

Singapore

Apr 2021 - Present

- Formulated and executed a research concept to detect Obstructive Sleep Apnea using ECG signals.
- Created machine learning models to identify Sleep Apnea and QT anomalies. Enhanced an existing model for detecting Atrial Fibrillation.
- Devised a signal processing algorithm to detect pauses.
- Acquired research expertise in examining clinical guidelines, journals, databases, and systematic review papers to develop the machine learning model.
- Developed proficiency in designing model specifications and interpreting ECG patterns

Entrepreneur First

Founder in Residence (CTO)

Singapore

Feb 2021 - Mar 2021

- Build the model for bridging the gap between music instructors/schools and students.
- Designed a Figma based mock prototype and python based Graphical User Interface (GUI) for customer validation.

SMRT Lab@NTU

Research Engineer

Singapore

Jan 2020 - Jan 2021

- Worked on SMRT team project of signal classification.
- Built a machine learning model to classify different SMRT signals and detect the interfering signal.
- Developed a pattern recognition algorithm using statistical approach.

Dauwels 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-EXP5529LP and implemented UART, SPI and I2C communication.

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.