

TANVI SAHAY

156 BRITTANY MANOR DRIVE, APT C, AMHERST, MA - 01002
tanvisahay31@gmail.com | +1 (413) 801-3892

EDUCATION

MAY 2018 **University of Massachusetts, Amherst, MA** | Master of Science | Computer Science
JUNE 2016 **Birla Institute of Technology, India** | Bachelor of Engineering | Electronics and Communication

SKILLS

Software Tool Keil μ Vision, PCBExpress, Proteus, LaTeX, Multisim, LabVIEW*
Hardware Microprocessors (Intel 8085), Microcontrollers (Arduino*, ATMEL AT89S51, TIVA C series tm4c123gh6pm, tm4c123gh6pge)
Language MATLAB, Assembly, C, Python, R* *Basic familiarity

RESEARCH EXPERIENCE

Aug 2015 Undergraduate Thesis | Team Member
-May 2016 **A.T.O.M - A TTool for Music transcription**

- Prepared a raw database for audio-visual recognition of isolated guitar notes and performed recognition of different notes using Machine Learning and Image Processing techniques
- Prepared transcribed output of recognized notes using the Python+LaTeX library

May 2015 Signal Processing Lab, B.I.T. Mesra | Summer Research Intern
-July 2015 **Study of changes in recognition efficiency of SVM for different free parameters**

- Developed a grid search algorithm for mapping changes in accuracy with changing kernels and kernel parameters for different types of Support Vector Classifiers
- Analyzed the relation between training to testing data ratio and recognition accuracy of the network. Compared select cases with pattern recognition neural network.

Dec 2014 B.I.T. Mesra | Undergraduate Research Student
-May 2015 **Decord : A device for locating lost item**

- Designed and assembled a voice-based hardware module to be used as an external attachment to everyday devices and assist in their location retrieval.
- Explored various applications for the system, including its use as a search assistant in sorting package at local mail centers, improving the manual sorting process.
- **Filed a patent for the invention: "Apparatus and method for locating misplaced item"**

Oct 2014 B.I.T. Mesra | Minor Project | Team Member
-Nov 2014 **Study and implementation of feed-forward network for hindi digit recognition**

- Studied and implemented feed-forward and pattern recognition network for spoken hindi digit recognition for varying neurons, activation functions and feature extraction techniques.
- Combined LPC and MFCC features to create a new feature set and compared the received accuracy with isolated LPC and MFCC cases.

PUBLICATIONS

- Arpit Aggarwal, Rajeev Kumar, **Tanvi Sahay**, Mahesh Chandra, "GuiTones-I: An Audio-Visual Database of Monophonic Guitar Tones", in Proc. IEEE TENCON 2016.
- **Tanvi Sahay**, Arpit Aggarwal, Annu bansal and Mahesh Chandra, "Grid Search Analysis of nu-SVC for Text-Dependent Speaker-Identification", in Proc. IEEE INDICON 2015 *Best Paper Award*
- **Tanvi Sahay**, Arpit Aggarwal, Annu Bansal and Mahesh Chandra, "SVM and ANN: A Comparative Evaluation" in Proc. IEEE NGCT-2015
- Arpit Aggarwal, **Tanvi Sahay** and Mahesh Chandra, "Performance Evaluation of Artificial Neural Networks for Isolated Hindi Digit Recognition using LPC and MFCC", in Proc. IEEE ICACCS-2015 *Best Paper Award*