

Maneesh Bilalpur
maneesh.bilalpur@research.iit.ac.in

EDUCATION

Master of Science by Research

Electronics and Communication Engineering

International Institute of Information Technology, Hyderabad, INDIA

July 2015 - May 2018

CGPA 8.5

Bachelor of Technology

Electronics and Communication Engineering

Vellore Institute of Technology, Vellore, INDIA

July 2011 - May 2015

CGPA 8.98

PROFESSIONAL EXPERIENCE

Researcher

National University of Singapore, Singapore

September 2017 – present

Adviser: Prof. Mohan Kankanhalli

- User Profiling with Implicit Behavioral Signals.
Currently working on using deep learning for Emotion and Gender Recognition using EEG and gaze features during facial emotion recognition. This work employs CNNs to avoid the manual task of data preprocessing in EEG to design an online training model for the data scarce domain.

Research Assistant

Center for Visual Information Technology, India

July 2015 – September 2017

Adviser: Prof. Ramanathan Subramanian

- Discovering Gender differences in Facial Emotion Recognition using Implicit Behavioral Signals
Worked on exploring low-cost commercial devices for acquisition and exploitation for user profiling tasks with machine learning methods.
- Cognitive Workload Classification for User-Interface Evaluation.
Designed and performed data acquisition set-up with Tobii EyeX tracker and Emotiv EEG headset towards measuring cognitive workload with applications for user interface evaluation.

PROJECTS

- Fine-grain Bird Classification using Siamese Network
Designed a Siamese network for a 200 class bird classification problem using pretrained VG-GNet using Tensorflow with Keras. *Python*
- Image Classification using Advanced Algorithms
Performed a 10 class image classification on CIFAR-10 and face recognition on Yale-face datasets using multiple Machine Learning methods with Bag-of-Visual-Words features.
Python & MATLAB

- Content-based Image Carving
Implemented Seam carving image cropping technique preserving SIFT features for reduction in image compression using Energy minimization approach. *MATLAB*
- Attention based Bi-LSTM for Speech Emotion Recognition.
Design of a bidirectional LSTM with attention for 5-class speech emotion recognition on IEMOCAP dataset. *Pytorch*

COMPUTING SKILLS

Programming: Python, MATLAB, C, C++(familiar), OpenCV

Machine Learning: Tensorflow(Keras), Pytorch, Scikit-learn

PUBLICATIONS

- **Maneesh Bilalpur**, Syed Mostafa Kia, Tat-Seng Chua and Ramanathan Subramanian, “Discovering Gender Differences in Facial Emotion Recognition via Implicit Behavioral Cues”, *Affective Computing & Intelligent Interaction (ACII)*, 2017.[**PDF**]
- **Maneesh Bilalpur**, Syed Mostafa Kia, Manisha Chawla, Tat-Seng Chua, Ramanathan Subramanian, “Gender and Emotion Recognition with Implicit User Signals”, *International Conference on Multimodal Interaction (ICMI)*, 2017.[**PDF**]
- **Maneesh Bilalpur**, Syed Mostafa Kia, Mohan Kankanhalli, Ramanathan Subramanian, “Implicit Signals for Gender and Emotion Recognition”, work in progress for the *IEEE Transactions on Affective Computing*.

HONORS

- Student Travel Grant award winner for ACII’17.
- 6282 rank in *Graduate Aptitude Test in Engineering* exam (top 4% of the country in Electronics and Communication).
- NSS service member VIT Vellore chapter.
- Manager for event Pragathi at VIT university aimed against women harassment which secured a place in Guinness book of world records as largest human chain formation.

COURSEWORK(Graduate level)

- Digital Image Processing
- Computer Vision
- Statistical Methods in AI
- Artificial Neural Networks