



R&D Lecture Series (Computer Engineering Department)

AY: 2018-19

Title of the Talk: “Machine learning for ecology: A case of visual and acoustic bird id”

Speaker Details:

The speaker **Dr. Arnav Bhavsar** has a commendable academic profile being an Assistant Professor at IIT Mandi from 2013. He is a part of the Multimedia Analytics Networks and Systems (MANAS) Lab at IIT Mandi, focusing on various academic and some industry research projects. His present areas of interest are Biomedical Image and Signal Analysis, Computer Vision, Machine learning.

He has completed his PhD from IIT Madras in 2011. He has also been a Postdoctoral fellow at GE Global research, Bangalore 2011-2012 and a Postdoctoral research associate, Univ. North Carolina, Chapel Hill, 2012-2013.

Further, he received the 5-year DST Inspire Research Grant in 2014. He regularly publishes in, and serves as a reviewer for various well-reputed International conferences / journals on image analysis, machine learning and medimage.

Description of Talk arranged on 09/02/2019:

The expert talk organized was a part of the NetSip 2019 seminar series. The expert talk was arranged on the topic, "Machine Learning for ecology". Dr. Arnav Bhavsar covered some machine learning (including deep learning) basics. Further, he discussed approaches to identify birds from images and sounds.

Some salient aspects in the overall bird id pipeline were also discussed, which included bird localization or bird-part detection in images and, enhancement and detection of bird acoustic activity. The content of the talk was largely based on the bird id project at IIT Mandi. He also shared the link and details for the Bird Classification project at IIT Mandi to help identify the birds within and around the IIT Mandi campus. The website for the same is: <https://birds.iitmandi.ac.in/>.

The session was extremely fruitful to everyone present there and motivated them and gave them numerous pointers and research gaps to work on.

Research Collaborations:

It was discussed with Dr. Arnav Bhavsar about exploration of opportunities whereby collaborative research work could be carried out between SCET and IIT Mandi. Further, he agreed to continue to externally guide our students.

Audience:

There were more than 90 participants which included students and faculty members from SCET and from other colleges. Apart from the participants that registered for NetSip 2019, a number of additional participants from the Computer Engineering Department also attended the expert talk.

Some Glimpses of the Event:



Welcoming the Speaker Dr. Arnav Bhavsar



Dr. Arnav Bhavsar discussing about Bird Classification



Dr. Arnav Bhavsar discussing open research issues pertaining to Machine Learning for Ecology



Felicitation of Dr. Arnav Bhavsar

Acknowledgment:

Through this brief note we would like to acknowledge the support provided by every single faculty & staff member involved in the NetSip 2019 event to make the event successful. We also thank the Head of the Department, Dr. Keyur Rana for all kind of support extended and Honourable Principal madam Dr. Vaishali Mungurwadi for granting permission for the said event and encouraging us. We would also like to extend our sincere gratitude to Associate Dean R&D, Dr. Chirag Paunwala for his guidance and support in organizing the expert talk.

The co-ordinators especially thank the expert on the occasion for sparing his precious services, time and sharing skilled expertise with participants. Lastly, the coordinators thank all the participants without whom the talk could not have been planned or executed.

Co-ordinated By: Dr. Keyur Rana, Computer Engineering Department

Dr. Nirali Nanavati, Computer Engineering Department

Compiled By: Dr. Nirali Nanavati, Computer Engineering Department