COMPSIG NITT

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Dear friends! COMPSIG NITT is a monthly newsletter to share the research work done in the Pattern recognition and computational intelligence laboratory, Department of Electronics and Communication Engineering, National Institute of Technology Trichy.

Concepts, Ideas pertaining to Computational intelligence, Pattern recognition and Signal processing are also included in this newsletter.

We expect the feedback, comments and articles from you all.
Issue 2-11: November 2016

Team members

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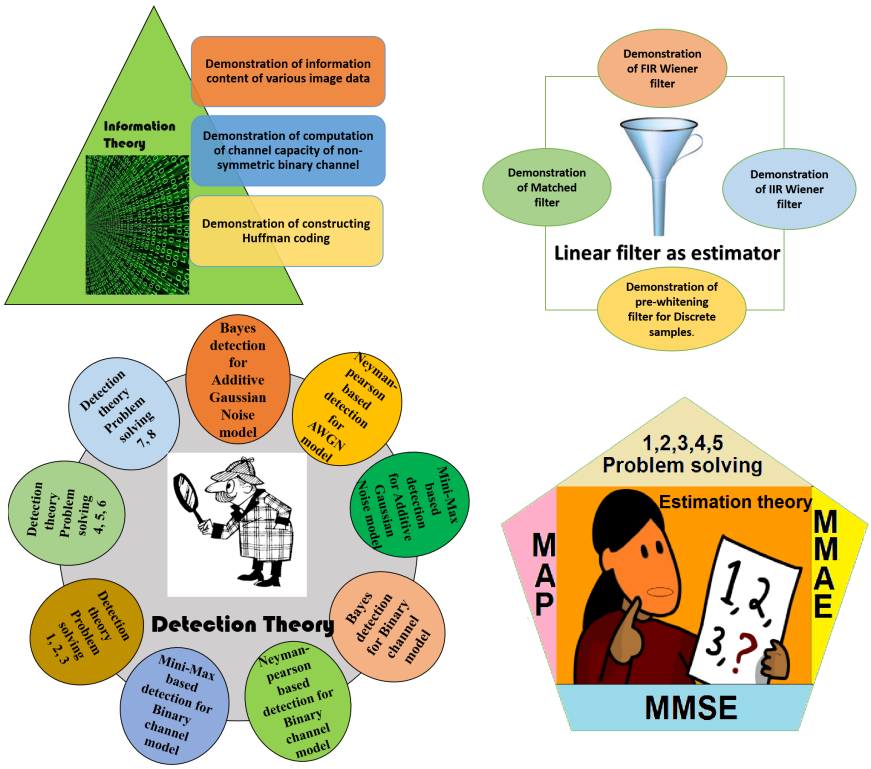
Case studies given for audio slide preparation by the students for the course “Statistical Theory of Communication”

The entire class of the current third year ECE students was divided into 21 batches, each with 5 members. Each batch was given a case study to prepare audio slides. Topics for case study were chosen from four different areas of communication - Information Theory, Detection Theory, Estimation Theory and Linear Filters as Estimators. The details of the case studies in these four areas are given below.



The evaluation strategy was based on aptness of the content, quality of slides (aesthetic point of view), quality of audio (clarity), depth of the technical content, contribution of the individual to the team work and over all quality. In order to ensure the fairness of evaluation, peer opinion on each audio slide was also collected from randomly chosen five other batches in addition to faculty’s evaluation. Each batch was encouraged to use different tools for audio slide preparation and their feedback on the tools used is meticulously summarized as below.

Students' feedback on the tools used to include audio in the slides

Recorded in the phone and linked to ppt
- **Pros** - User friendly.
- **Cons** - More time consuming.

EZVID: http://www.ezvid.com/
- **Pros** - Free tool.
- **Cons** - Beginner's trouble.

Voice recorder: (Mobile Application)
- **Pros** - User friendly interface and easy to customize.
- **Cons** - Audio quality is not the best.

Icecream: http://icecreamapps.com/
- **Pros** - Easy to use, free download and efficient.
- **Cons** - Permits maximum of 10 minutes of recording in one go.

Quicktime: https://support.apple.com/
- **Pros** - The audio quality is really good and there is no need of any installation
- **Cons** - Requires working Internet Connection.

Apowersoft: https://www.apowersoft.com/
- **Pros** - User friendly, Web based, no need to download software, easy to make annotations while recording and multiple output formats can be easily saved to drive with high quality and resolution.
- **Cons** - Had difficulty installing it.

Online text to speech conversion software
- **Pros** - Provides male and female voices with proper accent and hence appealing to general technical society and reaching out to many people with comfort.
- **Cons** - To record the narration of equations was tedious, it lacked life in certain places and the pauses had to be preplanned.

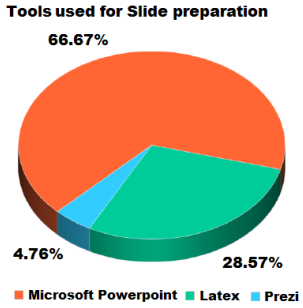
AZ Screen Recorder: http://www.dvdvideosoft.com/
- **Pros** - Very neat, HD quality video, captures sound very well and good sound quality, can be used on mobile phone, can be used anywhere, anytime and unlike a traditional computer software this is easily accessible.
- **Cons** - Not user friendly and to stop the video, the mobile screen must be pulled down which will also be recorded and hence that portion needs to be cut from the final video.

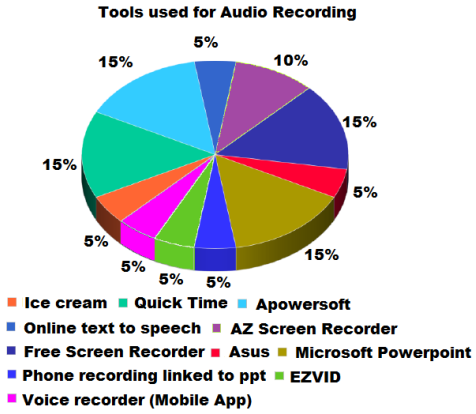
Free Screen Recorder: http://www.dvdvideosoft.com/
- **Pros** - It is a free tool, can be used to select any required screen area to record video as well as to take screen shots easily and does not use any watermark.
- **Cons** - Shortcut keys do not function at times, requires constant internet connection and audio quality is not the best.

Asus Sound Recorder: (Mobile application)
- **Pros** - Easy to use.
- **Cons** - Time consuming.

Microsoft Powerpoint: (Inbuilt audio recorder)
- **Pros** - It is very useful to make audio included presentations especially with the inbuilt audio recorder coming into play quite a many number of times without having to use any other tool and the timer can be adjusted to skip to the next slide after a pre-meditatedly fixed time.
- **Cons** - All the above mentioned features work only in 2016 version of Powerpoint and animation is cumbersome.

Students' feedback about the tools used for the preparation of audio slides





MS-Power Point:

Pros - Easy to use, prior knowledge of the tool, Universally used for making presentations.

Cons - Writing equations takes time.

LATEX:

Pros - Editing LATEX files easier with TEX and final version of the file can be seen during the process of editing itself.

Cons - LATEX has a steeper learning curve than power-point and therefore takes some time to get used to the commands in LATEX.

Prezi:

Pros - We can animate the transition from one slide to another. It is simpler to include audio and better for business class presentations. It is generally used in official meetings and preferred over MS-Powerpoint.

Cons -Equations inclusion is fuzzy since it does not include any special characters but the overall elegance is unmatched.

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Snapshots of the audio slides

Link to the audio slides: Audio slides on case studies in Statistical Theory of Communication

Quotes

> *"You have to dream before your dreams can come true."* — Dr. A.P.J.Abdul Kalam

Coming up Global elective: PATTERN RECOGNITION (EC 009)

- Summarize the various techniques involved in pattern recognition.
- Identify the suitable pattern recognition techniques for the particular applications.
- Categorize the various pattern recognition techniques into supervised and unsupervised.
- Summarize the mixture models based pattern recognition techniques.
- Summarize the artificial intelligence based pattern recognition techniques.

Tentative evaluation scheme(weightage)-Under flexible curriculum structure.

- **Cycle test 1 - 15%**
- **Cycle test 2 - 15%**
- **Matlab simulation experiment - 40%**
- **End semester exam - 30%**

Expression of interest through the link: https://google/forms/Pattern recognition

Link to the summary of assignments on Pattern Recognition COMPSIG NITT Newsletter, April 2016

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Feedback

COMPSIG NITT invites articles and innovative ideas from readers for the Reader's Space column. We expect feedback and comments to monthly newsletter COMPSIG NITT .

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