

Multimedia Computing Group

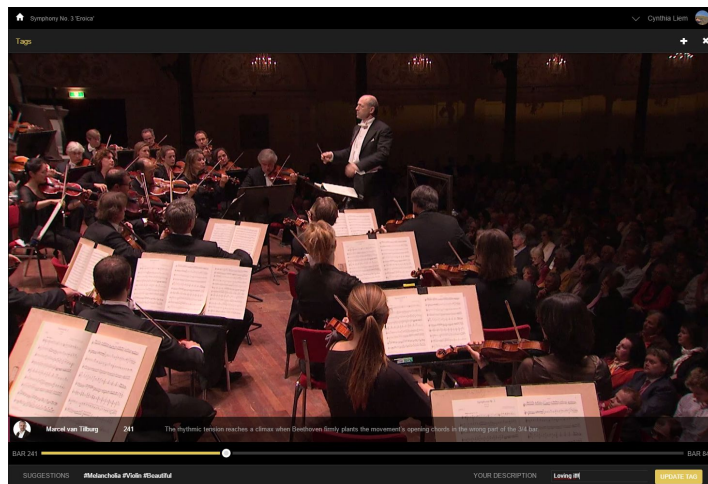
Master introduction presentation

Dr Cynthia C. S. Liem MMus
c.c.s.liem@tudelft.nl (5E.300)

Multimedia Computing

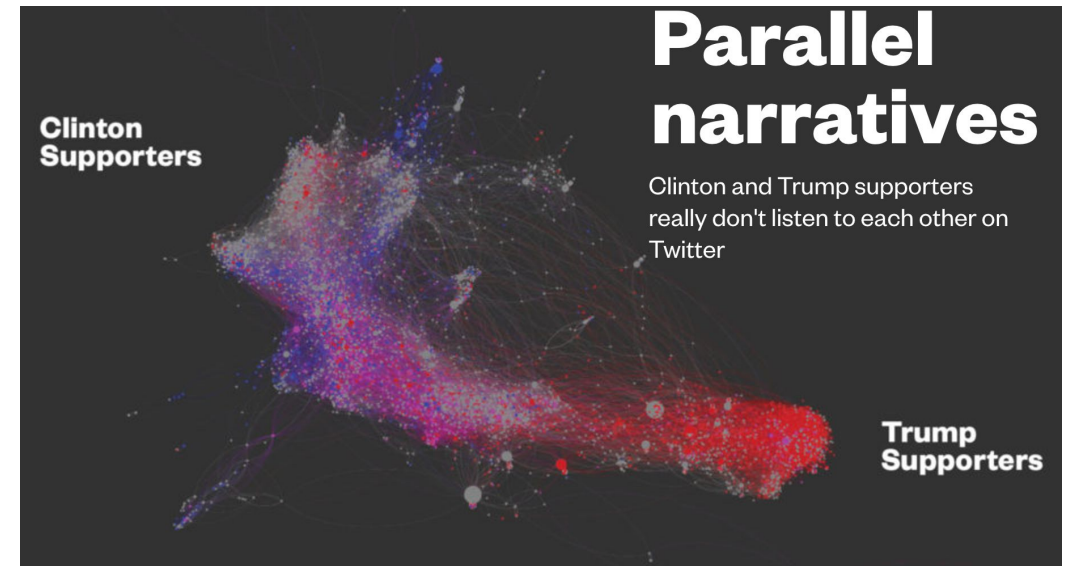
Improving multimedia information
access

We study multimedia...



NIEUWE MUZYK bij de GEBROEDERS ABRAHAMS,
(Boekwinkel Langendelft.)
L'instant, Principes de Lyre & de Guitare à six cordes, 12 St.
Glachant, Trois Duos agréables pour deux Flutes, f 2.
Gamme pour la Flute ordinaire, 8 St.
Paer, Ouverture d'Agnèse pour le Piano-Forte, 16 St.
Beethoven, Variations pour le Piano-Forte, 14 St.
Dussek, Sonate posthumé à 4 mains pour le Piano-Forte, f 1.

...in networked communities of human users...



...who have non-trivial thoughts on when something is relevant...

What is relevant? Why? When?



YouTube

Openbaar gedeeld - 1 dec. 2014

We never thought a video would be watched in numbers greater than a 32-bit integer (=2,147,483,647 views), but that was before we met PSY. "Gangnam Style" has been viewed so many times we had to upgrade to a 64-bit integer (9,223,372,036,854,775,808)!

People with a good MMC fit...

- combine interest in multimedia content analysis, machine learning and information retrieval...
- are neither afraid of math, nor of actual human users...
- have a critical attitude towards data quality and evaluation metrics.

One important note

We are a fairly hybrid group: different supervisors have different 'accents' and prerequisites.

Therefore, contact prospective supervisors in time!

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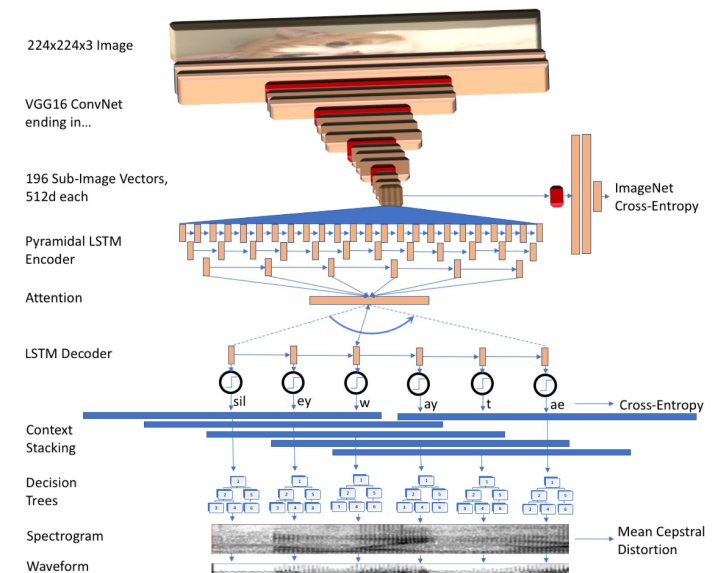
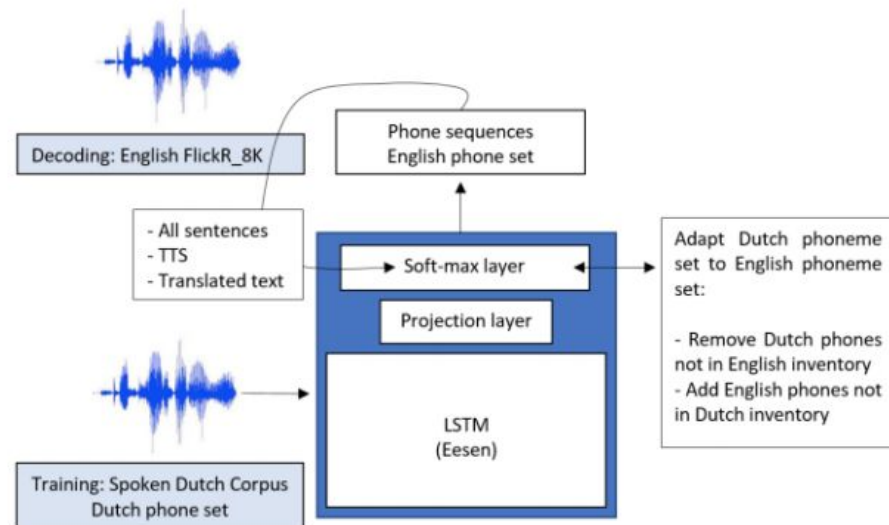
Staff members and their interests

Odette Scharenborg

o.e.scharenborg@tudelft.nl



- Automatic Speech Recognition
- Low-resource languages
- Perceptual aspects
- Deep learning



Pablo Cesar

p.s.cesar@cwil.nl [part-time at TUD]



- Multimedia experience
- Wearable technology
- Multimedia systems



Huijuan Wang

h.wang@tudelft.nl



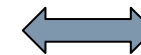
- Complex networks



Which to buy



Join or not



Opinion



Social Networks

Friendship, work relation,
Facebook

Elvin Isufi

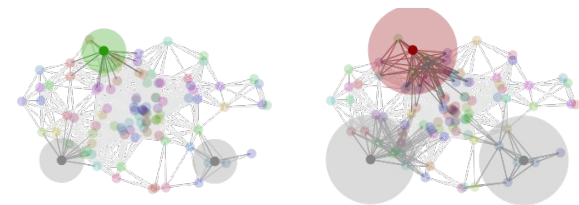
e.isufi-1@tudelft.nl



- Graph signal processing
- Graph neural networks



Social networks



Julián Urbano

j.urbano@tudelft.nl



- Evaluation
- Information Retrieval

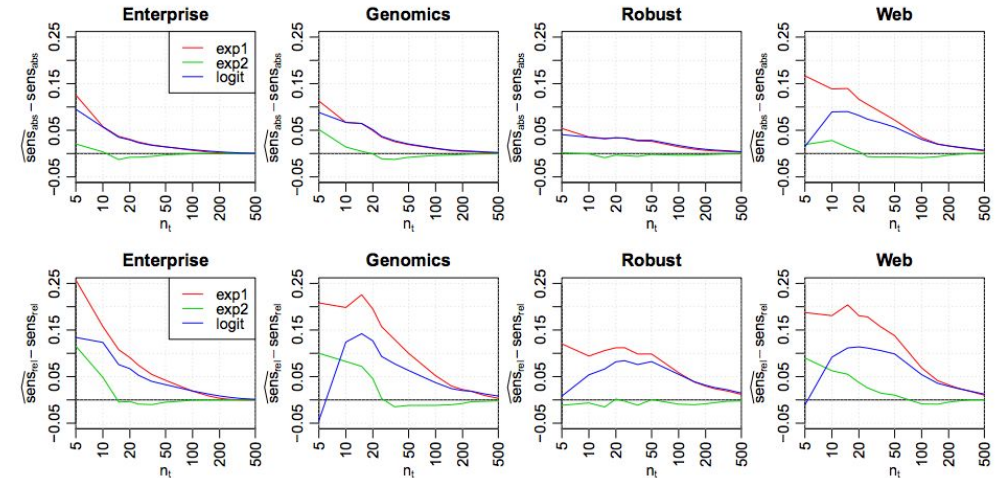
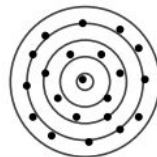


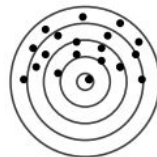
Fig. 7 Bias of the estimators of $sens_{obs}$ (top) and $sens_{rel}$ (bottom) scores for the simulated collections originating from each TREC collection. The plots only show simulated collections under realistic statistical assumptions.



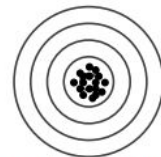
Not Valid but Reliable



Valid but Not Reliable



Neither Valid nor Reliable



Both Valid and Reliable

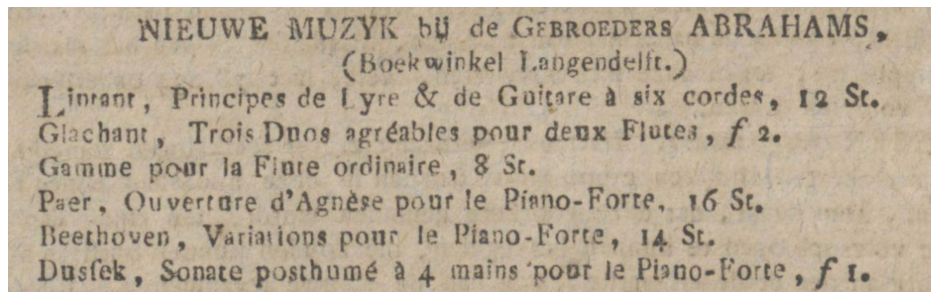
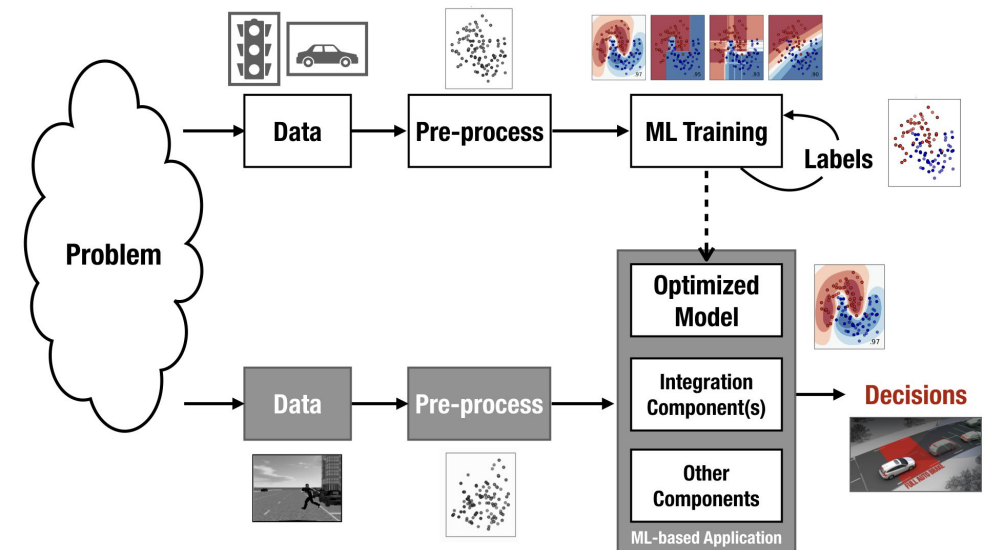
Cynthia Liem

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- Trustworthy AI
- Retrievability/accessibility of 'hard-to-surface' items
- Quality assurance for applied ML

Traits	Extraversion	Agreeableness	Conscientiousness
score	0.046729	0.000000	0.048544
score	0.925234	0.912088	0.951456



Alan Hanjalic

a.hanjalic@tudelft.nl



- Multimedia content analysis, search and recommendation
- Will **not** serve as daily supervisor for MSc theses in the coming year, due to Head of Department role
- May be signatory for your IEP (and chair of your committee), in case you graduate with an Assistant Professor

Multimedia Computing

Recommended courses

Highly recommended courses

Courses	Software Technology	Data Science & technology	Artificial Intelligence Technology
Common Core for your research group	CS4065 Multimedia Search and Recommendation	CS4065 Multimedia Search & Recommendation	IN4325 Information Retrieval
Specialisation course	CS4220 Machine Learning 1	CS4195 Modeling and Data analysis in complex networks	CS4240 Deep Learning
Specialisation course	CS4110 Artificial Intelligence for Software Testing and Reverse Engineering	CS4240 Deep Learning	CS4195 Modeling and Data analysis in complex networks
Seminar course	CS4125 Seminar Research Methods for Data Science	CS4125 Seminar Research Methods for Data Science	CS4125 Seminar Research Methods for Data Science

Recommended courses

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Common Core for your research group		CS4220 Machine Learning 1	CS4065 Multimedia Search & Recommendation
Specialisation course	CS4145 Crowd Computing	IN4325 Information Retrieval	CS4270 Conversational Agents
Specialisation course	IN4325 Information Retrieval	IN4182 Digital Audio and Speech Processing	IN4010(-12) Artificial Intelligence Techniques
Seminar course	IN4314 Seminar Selected Topics in MC		

MSc topics



<https://mmc-tudelft.github.io/quickweb/msc-topics.html>

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