Individual Assignment 2: SCSE Dashboard

CZ4125: Developing Data Products

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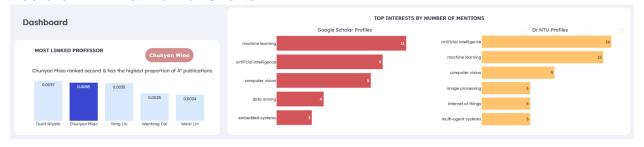
Page 1: Main Dashboard

Dashboard has been deployed with Heroku: https://scse-dashboard.herokuapp.com/dashboard (website is available until 28 November).



For all pages, the hover text for the charts is descriptive and formatted properly.

Feature 1.1: First Row of Charts



- User can view the most linked researchers (determined using PageRank algorithm on full network includes Conferences, Paper Titles and Authors as nodes).
- User can view the research interests that the researchers listed on their profiles. This was extracted from both dr-ntu and google scholar webpages.

Feature 1.1.2: Page Rank Chart:



• Users can click on 'Chunyan Miao' to go to the 'Featured Profile' Page (also available through the navigation bar).

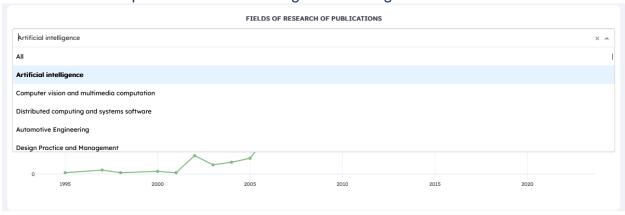
Below are the results from the PageRank algorithm.

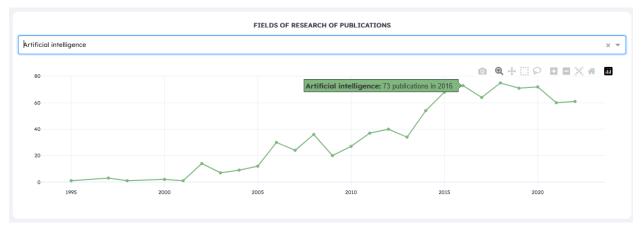
Feature 1.2: Second Row of Charts



- Users can view the number of publications for the different fields of research (FoR) over the years.
- They can also see the most researched fields and least researched fields, which are highlighted in the same colour on the line chart.
- There is a dropdown menu allowing users to filter the content.

Feature 1.2.1: Dropdown Menu Searching and Filtering





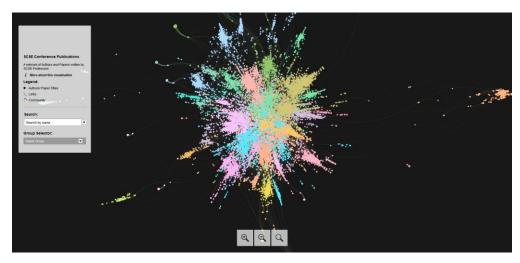
- Users can filter and view the chart for a specific FoR based on their selection.
- Dropdown menu items are ordered with the 'Most Researched Topics' and 'Least Researched Topics' at the start.
- Users can search for specific FoRs to view their publications over time.
- Hover text for all the charts is descriptive.

Feature 1.2.2: Network of Publications and Authors

- Users can see a small version of the network diagram.
- Users can press 'view in fullscreen' to open the network diagram in another tab.



Network of Publications and Authors in Full Screen



Feature 1.3: Third Row of Charts



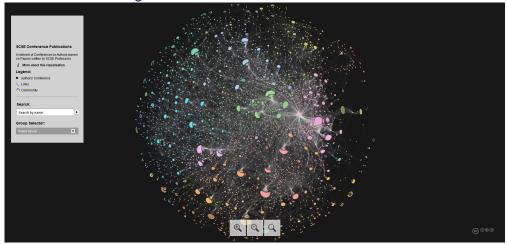
 Users can see the conference information and network diagram of SCSE researchers & conferences.

Feature 1.3.1: Conference Information

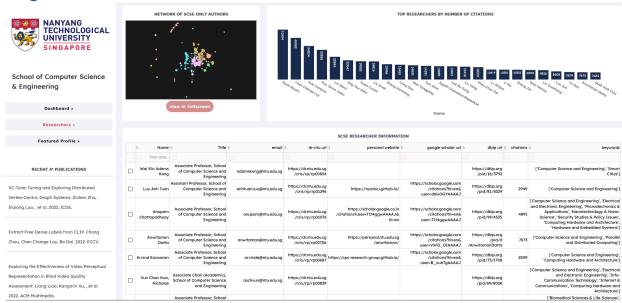


- Users can see the most popular conferences in 2022.
- Users can view a scatter plot of the total conference publications and a bar chart of the most popular conferences in the year.
- Users can see the all-time submission proportion in terms of rank.

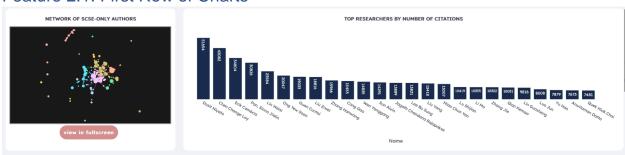
Feature 1.3.2: Network Diagram of Conferences and Researchers in Full Screen



Page 2: Researcher Information

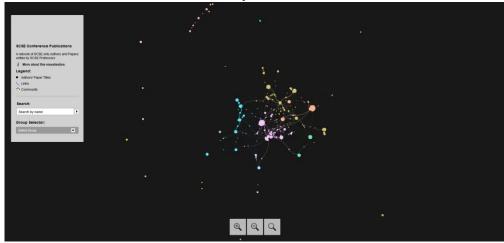


Feature 2.1: First Row of Charts

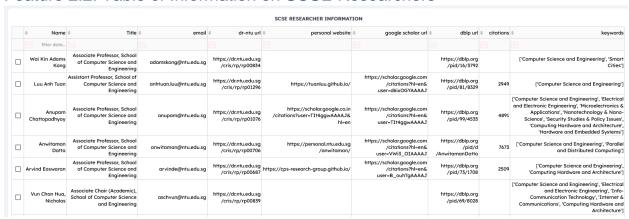


- Users can view the SCSE-only network diagram in which non-SCSE co-authors were removed
- Users can see the number of citations of the top researchers.

Feature 2.1.2: Network Chart of SCSE-only Authors in Full Screen



Feature 2.2: Table of Information on SCSE Researchers



- Users can view the information of the researchers, such as their websites/ online profiles, their title, email, number of citations and dr-ntu keywords.
- Users are able to filter and sort the columns of the table.

Feature 2.2.1: Filtering and Sorting Table Information



				500
	Title	email e	dr-ntu url	\$
Aa filter data	Aa	Ao		
Luu Anh Tuan	Assistant Professor, School of Computer Science and Engineering	anhtuan.luu@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp01296	
Long Cheng	Assistant Professor, School of Computer Science and Engineering	c.long@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00772	https:
Lin Guosheng	Assistant Professor, School of Computer Science and Engineering	gslin@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00483	
Zhao Jun	Assistant Professor, School of Computer Science and Engineering	junzhao@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00501	http:
Lana Obraztsova	Assistant Professor, School of Computer Science and Engineering	lana@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00219	
Mohamed M. Sabry	Assistant Professor, School of Computer Science and Engineering	msabry@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00314	htt
Lin Shang-Wei	Assistant Professor, School of Computer Science and	shang-wei.lin@ntu.edu.sg	https://dr.ntu.edu.sg	https:/

- Users can search for specific matches for each column in the table.
- They can also sort every column in the table.

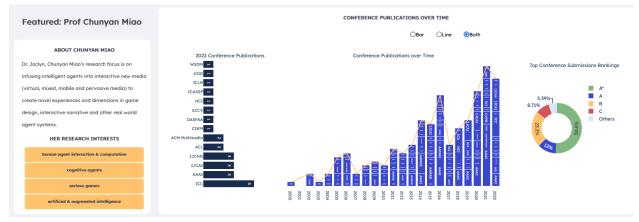
Page 3: Featured Profile



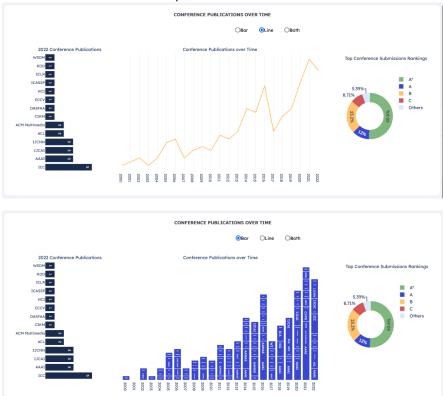
- Featured profile was selected based on PageRank scores. After calculating the PageRank scores, I looked at the researchers and sorted them by the number of publications to A* papers. Therefore, the profile chosen was 'Chunyan Miao'.
- There are clickable links at the top of the page so that users can email the feature professor or access their websites.



Feature 3.1: First Row of Charts

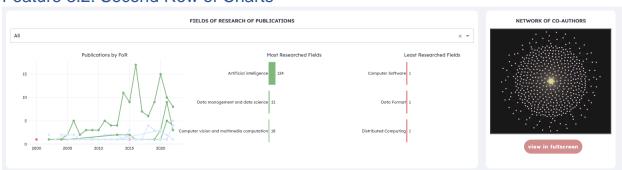


- Users can view the profile information of the professor which was extracted from her dr-ntu profile.
- Users can view her research interests (shorten information which was extracted from her google scholar profile and dr-ntu profile).
- Users can view information on her conference publications.
- Around 50% of her publications are to A* ranked conferences.



Feature 3.1.1: Bar/Line/Both Radio Options

- Users can toggle charts between 'Line', 'Bar' or 'Both' depending on if they are interested in the number of submissions to each conference or just the total number.
- Users can also see the number of conference publications in 2022 by the conference name.
- This feature is also available on a few other charts for users to change the view to their liking.



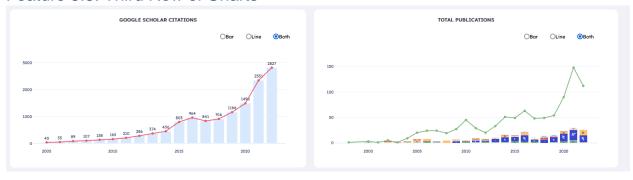
Feature 3.2: Second Row of Charts

- Users can view the FoR of the professor, and her most/least researched areas.
- There is a dropdown menu to filter the chart (view 'Feature 1.2.1: Dropdown Menu Filtering' for detailed information.

SCSE Conference Publications
Chayman Mass Co. Autor Herons
Legand:
Autor
Co. Autoret
Co. Autoret
Search:
Search by name

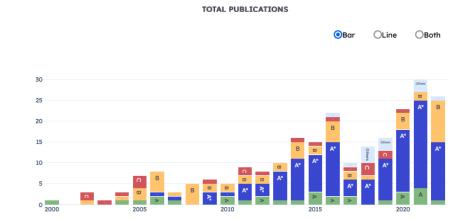
Feature 3.2.1: Network Diagram of Chunyan Miao's Co-Authors in Full Screen

Feature 3.3: Third Row of Charts



- Users can view the total google scholar citations over the years of Chunyan Miao (taken from her google scholar website).
- They can also see the total number of publications she has made over the years, and the proportion of which were in ranked conferences.
- There is a radio menu for the charts to change the view from line charts, bar charts or both.
- This is especially handy for the 'TOTAL PUBLICATIONS' chart as the user can compare
 the total publications to the publications submitted to ranked conferences, and further
 examine the proportion of ranked submissions over the years.

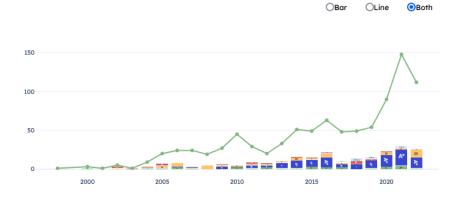
Toggling between 'Bar', 'Line' and 'Both'



TOTAL PUBLICATIONS



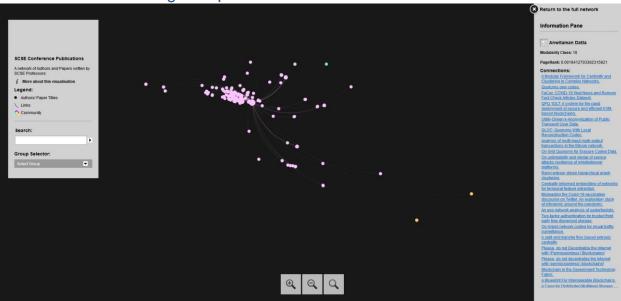
TOTAL PUBLICATIONS

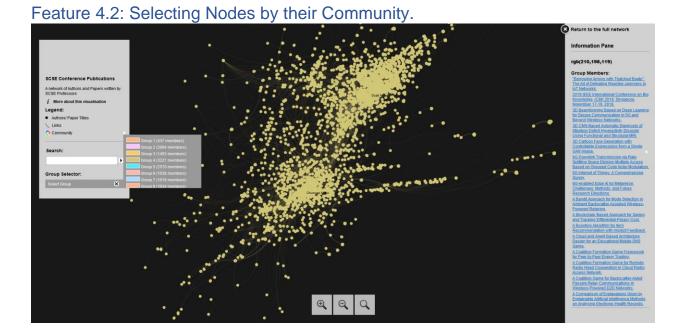


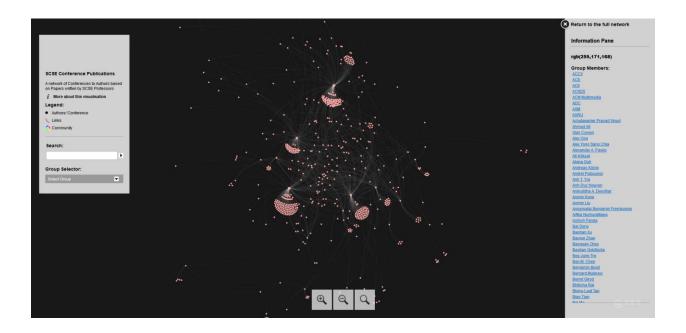
Feature 4: Network Diagrams

- Users can search specific nodes in the network charts.
- They can also select the different groups and view the members (based on community detection algorithm).
- For every selection they make, users will be able to view the connections/ group members in the panel on the right.
- Nodes will also have label as the user moves the mouse c

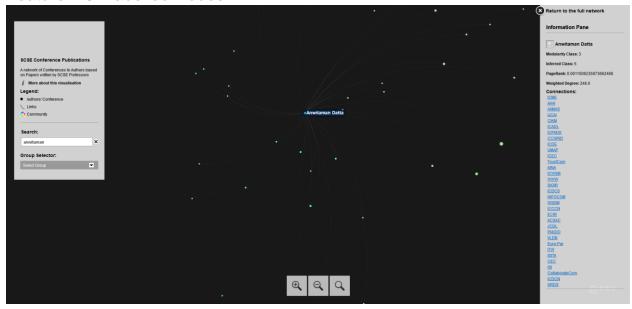
Feature 4.1: Searching for Specific Nodes







Feature 4.3: Labelled Nodes



Feature 5: Navigation Bar

- Users can go to three different pages 'Dashboard', 'Researchers' and 'Featured Profile'.
- They can also view the recent A* ranked publications by SCSE Researchers OR the recent publications of the featured researcher, depending on the page they are on.

Feature 5.1: Navigation Bar for Pages 1 and 2 (Main Dashboard and Researcher Information)





School of Computer Science & Engineering

Dashboard >

Researchers >

Featured Profile >

School of Computer Science & Engineering

Dashboard >

Researchers >

Featured Profile >

RECENT A* PUBLICATIONS

VC-Tune: Tuning and Exploring Distributed
Vertex-Centric Graph Systems. Zichen Zhu,
Siqiang Luo, , et al. 2022. ICDE.

Extract Free Dense Labels from CLIP. Chong Zhou, Chen Change Loy, Bo Dai. 2022. ECCV.

Exploring the Effectiveness of Video Perceptual Representation in Blind Video Quality Assessment. Liang Liao, Kangmin Xu, , et al. 2022. ACM Multimedia.

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Feature 5.2: Navigation Bar for Page 3 (Chunyan Miao's Profile)



School of Computer Science & Engineering

Dashboard >
Researchers >
Featured Profile >

RECENT PUBLICATIONS

Dynamic Incentive Mechanism Design for COVID-19 Social Distancing. Xuan Rong Zane Ho, Wei Yang Bryan Lim, Hongchao Jiang, Jer Shyuan Ng, Han Yu, Zehui Xiong, Dusit Niyato, Chunyan Miao. 2022. AAAI.

Prior-Guided Transfer Learning for Enhancing
Item Representation in E-commerce. Heng-Yi Li,
Yabo Ni, Anxiang Zeng, Han Yu, Chunyan Miao.
2022. AAAI.

APPENDIX: Full Page Screenshots

Note: Page overflow is shown here for illustrative purposes. On the actual dashboard, user will scroll on the page to see the overflow.



School of Computer Science & Engineering

Dashboard >

Researchers >

Featured Profile >

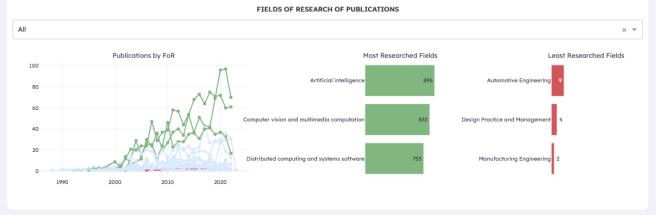
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School of Computer Science & Engineering

Dashboard >

Researchers >

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SCSE RESEARCHER INFORMATION

	Name		\$ email	dr-ntu url	personal website	google scholar url	dblp url	citations	\$ keywords
	Ao filter data								
	Wai Kin Adams Kong	Associate Professor, School of Computer Science and Engineering	adamskong@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00834			https://dblp.org /pid/16/3792		['Computer Science and Engineering', 'Smart Cities']
	Luu Anh Tuan	Assistant Professor, School of Computer Science and Engineering	anhtuan.luu@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp01296	https://tuanluu.github.io/	https://scholar.google.com /citations?hl=en& user=d6ixOGYAAAAJ	https://dblp.org /pid/81/8329	2949	['Computer Science and Engineering']
	Anupam Chattopadhyay	Associate Professor, School of Computer Science and Engineering	anupam@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp01076	https://scholar.google.co.in /citations?user=TI14ggwAAAJ& hl=en	https://scholar.google.com /citations?hl=en& user=TIt4ggwAAAAJ	https://dblp.org /pid/99/4535	4891	['Computer Science and Engineering', 'Electrical and Electronic Engineering', 'Microelectronics & Applications', 'Nanotechnology & Nano- Science', 'Security Studies & Policy Issues', 'Computing Hardware and Architecture', 'Hardware and Embedded Systems']
	Anwitaman Datta	Associate Professor, School of Computer Science and Engineering	anwitaman@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00706	https://personal.ntu.edu.sg /anwitaman/	https://scholar.google.com /citations?hl=en& user=VWi3_OIAAAAJ	https://dblp.org /pid/d /AnwitamanDatta	7673	['Computer Science and Engineering', 'Parallel and Distributed Computing']
	Arvind Easwaran	Associate Professor, School of Computer Science and Engineering	arvinde@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00687	https://cps-research-group.github.io/	https://scholar.google.com /citations?hl=en& user=B_ouhTgAAAAJ	https://dblp.org /pid/73/1708	2509	['Computer Science and Engineering', 'Computing Hardware and Architecture']
	Vun Chan Hua, Nicholas	Associate Chair (Academic), School of Computer Science and Engineering	aschvun@ntu.edu.sg	https://dr.ntu.edu.sg /cris/rp/rp00839			https://dblp.org /pid/69/8028		['Computer Science and Engineering', 'Electrical and Electronic Engineering', 'Info- Communication Technology', 'Internet & Communications', 'Computing Hardware and Architecture']
		Associate Professor, School							l'Biomedical Sciences & Life Sciences',



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Dashboard >

Researchers >

Featured Profile >

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2022. AAAI.

CCLF: A Contrastive-Curiosity-Driven Learning
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Learning. Chenyu Sun, Hangwei Qian, Chunyan
Miao, Chenyu Sun, Hangwei Qian, Chunyan Miao.
2022. IJCAI.



