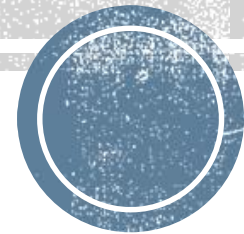


ONTOLOGY BASED KEYWORDS SEARCH FOR IMAGE PROCESSING

MCC 14012 OOI JESSIE

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CO-SUPERVISOR: DR LIEW SIAU CHUIN

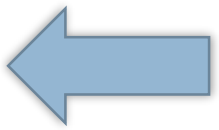
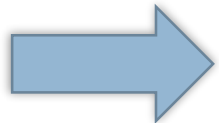


Agenda

- Introductions
- Objectives, Scope
- Methodology
- Result
- Contributions
- Limitation & Future work
- Q & A



- **Introductions**
- Objectives, Scope
- Literature Review
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Facebook
("Facebook.com Traffic Statistic,"
2016)



**Higher end of the
trending list** ("Facebook
Explore Google Trend," 2016)





Lack of basic understanding



Don't know what they are searching



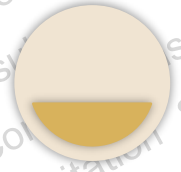
Vocabulary mismatch



Search inefficiency

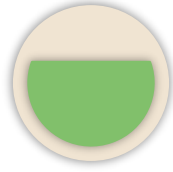


- Introductions
- Objectives , Scope
- Literature Review
- Methodology
- Results
- Conclusions & Future Work
- Limitations
- Q & A



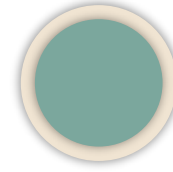
Study

Query modification techniques for helping junior researcher in identifying suitable keyword in academic search



Propose

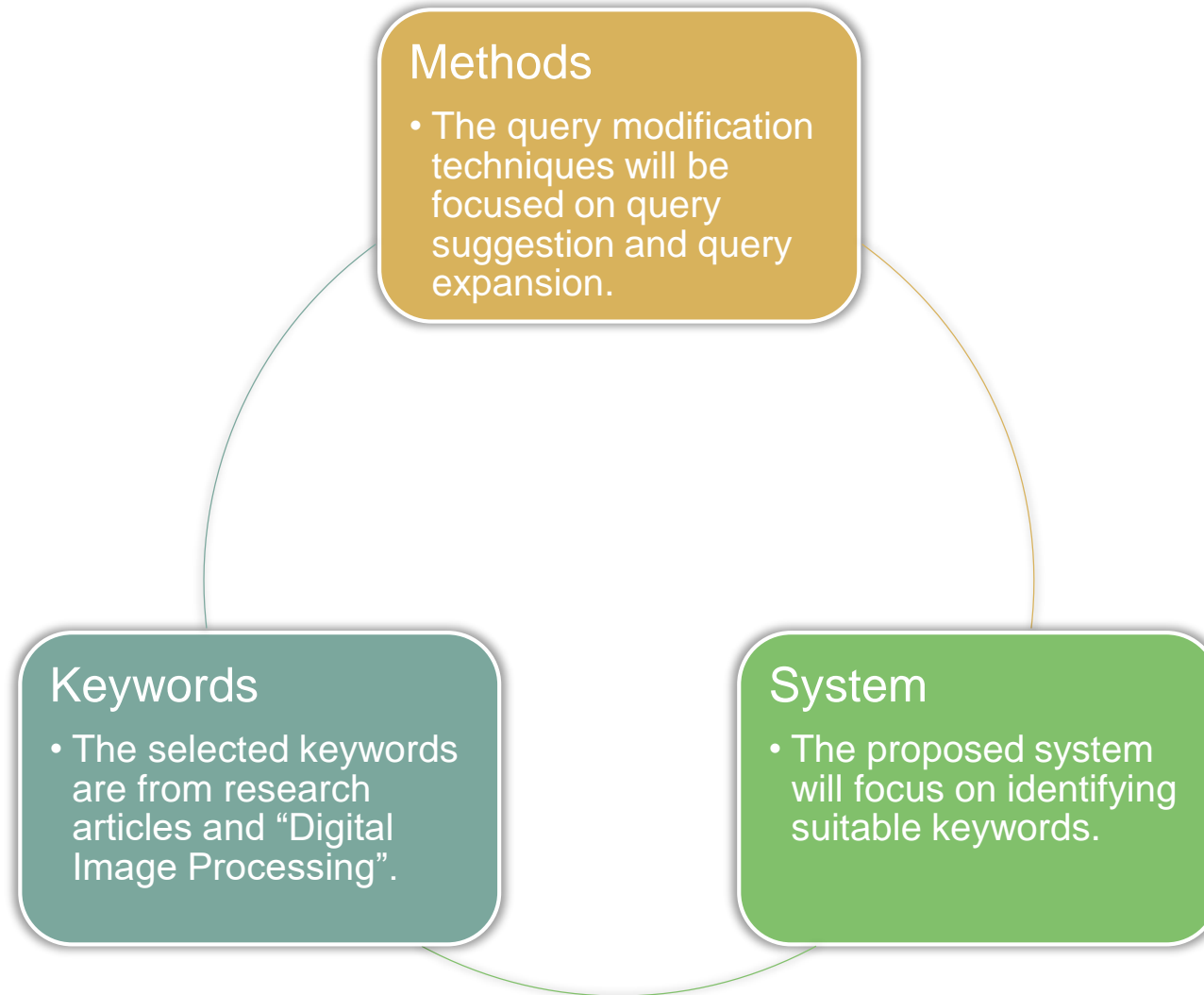
Ontology based keyword search system for improving keywords selection for search queries



Evaluate

The developed image processing ontology.





Query Modification

Query Suggestion

Query Expansion

Relevance-oriented Query Suggestion

Diversifying Query Suggestion

Corpus Dependent Knowledge Model

Relevance Feedback

Corpus Independent Knowledge Model

Click-through

Session-based

Several sources

Term Clustering

Term Selection

Steaming

Pseudo Relevance Feedback

Implicit Feedback

Explicit Feedback

Query Log Data

Session Data

Top retrieved documents

Eye tracking

Cursor movement

Clicked data

Documents relevancy

User feedback



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Develop
Ontology

Ontology
Testing

OKSS Testing

Ontology
Development 101

Develop
OKSS

Precision and
Recall, SUS



Metric based evaluation



- Introductions
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Precision and Recall

$$\text{Precision} = \frac{\text{Total number of relevant records retrieved}}{\text{Total number of retrieved records}} \times 100$$

$$\text{Recall} = \frac{\text{Total number of relevant records retrieved}}{\text{Total number of relevant records}} \times 100$$

73.44%



SUS

	Strongly Disagree				Strongly Agree	Scale Position	Calculation	Score Contribution
I think that I would like to use this system frequently				X		4	(4-1)	3
I found the system unnecessarily complex		X				2	(5-2)	3
I thought the system was easy to use					X	5	(5-1)	4
I think that I would need the support of a technical person to be able to use this system	X					1	(5-1)	4
I found the various functions in this system were well integrated				X		4	(4-1)	3
I thought there was too much inconsistency in this system		X				2	(5-2)	3
I would imagine that most people would learn to use this system very quickly					X	5	(5-1)	4
I found the system very cumbersome to use	X					1	(5-1)	4
I felt very confident using the system					X	5	(5-1)	4
I needed to learn a lot of things before I could get going with this system	X					1	(5-1)	4
								36
							Total x 2.5	90

81.62



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- Search ineffectiveness
- Query modification technique

- Image processing ontology
- Keywords system



- Query inefficiency is not caused by the short query length (junior researcher)
- Proposed system help junior research in selecting keywords

Proposed system





Limitation

- Other possibilities ?
- Keywords may be limited



Future Work

- Methods of presentation.
- Developed image processing ontology.
- Keywords selection can be improved
- Analysis on the keywords submitted by the user



- Introductions
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- **Methodology**
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- Contributions
- Limitation & Future work
- **END**

Thank You!

