Critical Inquiry Topics
Semester 1 AY2024/2025

Project ID	Project Title	Supervisor
AC-01	Analysis of communities	Alton Chua
AC-02	Analysis of user-generated content	Alton Chua
AC-03	Deception on social media	Alton Chua
AC-04	Rumors and rumor denials	Alton Chua
AC-05	Reduction of Confirmation Bias	Alton Chua
AC-06	Bias Unveiled: A Comparative Analysis of AI Chatbots	Alton Chua
AC-07	Decoding Student's Intention to Adopt LLMs via Task Factors	Alton Chua
AC-08	Beyond Likes and Shares: How Danmaku Shapes Viewer Perception and Engagement	Alton Chua
AC-09	Moral Judgements from AI: A Comparative Analysis of AI	Alton Chua
AH-01	Any issues/topics in Singapore	Adrian Heok
AH-02	Public health issues in new media	Adrian Heok
AH-03	Design thinking at work	Adrian Heok
BK-01	Leading through stories	Brenda Lee
BK-02	Leadership through storytelling	Brenda Lee
BK-03	Storytelling in speechmaking for an occasion	Brenda Lee
BK-04	Storytelling in speechmaking during a crisis	Brenda Lee
BK-05	Leading in a crisis through stories	Brenda Lee
BK-06	Virality of Stories	Brenda Lee
BK-07	Storytelling on Video	Brenda Lee
BK-08	Leadership in Literature	Brenda Lee
BL-01	The Social Context of Libraries and Librarians	Brendan Luyt
BL-02	Understanding Wikipedia as a social technology	Brendan Luyt

Project ID	Project Title	Supervisor
BL-03	Domain analysis of academic disciplines or sub-disciplines	Brendan Luyt
CK-01	Knowledge graph or graph database application development using Neo4j	Chris Khoo
CK-02	Information extraction using generative AI technology to populate a knowledge graph	Chris Khoo
DG-01	Understanding perceptions of deepfakes	Dion Goh
DG-02	Designing games for deepfake identification	Dion Goh
DG-03	Understanding perceptions of safety in the metaverse	Dion Goh
DG-04	AI literacy – perceptions and influential factors	Dion Goh
DG-05	Perceptions of generative AI at work and play	Dion Goh
FT-01	The Value and Impact on a Business' revenues through the use of Digital Proximity Solutions	Francis Tay
FT-02	Customer Intelligence collection methods and analysis	Francis Tay
FT-03	Digital Transformation	Francis Tay
FT-04	Data Analysis in the Workplace	Francis Tay
FT-05	Data Analytic Tools	Francis Tay
FT-06	Intelligent Automation Solutions and Tools	Francis Tay
HO-01	Investigating health misinformation in social media content	Hamzah Osop
HO-02	Investigating hallucination and misinformation from large language models use	Hamzah Osop
HO-03	Improving LLMs with knowledge bases	Hamzah Osop
HO-04	Using LLMs to construct knowledge graph for literature-based discovery	Hamzah Osop

Project ID	Project Title	Supervisor
JP-01	Evaluating deepfake detection algorithms	Jonathan Pan
JP-02	Security Audit using LLM	Jonathan Pan
JS-01	Perception and use of libraries	Joanna Sin
JS-02	Everyday life information behaviour	Joanna Sin
JS-03	Information inequality: Status, effects, and remedies	Joanna Sin
JS-04	Trending topics in Library and Information Science	Joanna Sin
LCK-01	Porting the arXif dataset into Neo4j	Lee Chu Keong
LCK-02	Porting the movies dataset into Neo4j	Lee Chu Keong
LCK-03	Vertical farming: A bibliometric analysis	Lee Chu Keong
LCK-04	Storage of Family Tree Information Using Neo4J	Lee Chu Keong
LCK-05	Storage of Research Publications Using Neo4J	Lee Chu Keong
LCK-06	Constructing a Web Front-End for a Movie Community based on Neo4j database	Lee Chu Keong
LCK-07	An Investigation into the Career Anchors of Postgraduate Students	Lee Chu Keong
LCS-01	Information searching and learning using Generative AI	Lee Chei Sian
LCS-02	Exploring digital nudging	Lee Chei Sian
LCS-03	Understanding information practices in the transitions to university and workplace	Lee Chei Sian
LCS-04	Examining the online information environment for neurodivergent learners	Lee Chei Sian
LGP-01	Case study of sustainability informatics in organizations	L. G. Pee
LGP-02	Critical success factors of sustainability information management in organizations	L. G. Pee

Project ID	Project Title	Supervisor
LGP-03	Survey of sustainability information management in organizations	L. G. Pee
LGP-04	Use of generative artificial intelligence (AI) in organizations	L. G. Pee
LGP-05	Use of generative artificial intelligence (AI) by professionals	L. G. Pee
NJC-01	Sentiment Analysis of Social Media Content	Na Jin Cheon
NJC-02	Analysis of Online Discussions about Emerging Subjects in Singapore	Na Jin Cheon
NPS-01	Understanding the library trends in post-pandemic period	Nirmal Prabu S/O Sangar
NPS-02	Ensuring Accessibility in Libraries: Strategies and Tools for Providing Equitable Access to Information and Services	Nirmal Prabu S/O Sangar
RSD-01	The Role of Knowledge Management and Information Systems in Humanitarian Assistance: Case Studies from the AHA Center	Rajesh Singh Dhillon
RSD-02	Knowledge Management and Information Systems Strategies for Disaster Relief Operations: Lessons from the ASEAN Experience	Rajesh Singh Dhillon
RSD-03	Innovative Knowledge Management and Information Systems Approaches for Humanitarian Assistance and Disaster Response	Rajesh Singh Dhillon
RSD-04	Building Resilient Knowledge Management and Information Systems in Non-Profit Organisations	Rajesh Singh Dhillon
RSD-05	Evaluating Gaps in KM ISO 30401 and Recommended Improvements for the Future of Knowledge Management	Rajesh Singh Dhillon
RSD-06	Enhancing Operational Efficiency and Impact in Non-Profit Organisations through Knowledge Management and Information Systems	Rajesh Singh Dhillon
RSD-07	Integrating DEI Initiatives in Knowledge Sharing and Information Systems within Humanitarian Organisations or academia sector	Rajesh Singh Dhillon
RSD-08	The Importance of Tacit Knowledge for the Future of Work: A Comprehensive Study	Rajesh Singh Dhillon
RSD-09	Leveraging Knowledge Management and Information Systems for Effective Business Processes in Non-Profit Sectors	Rajesh Singh Dhillon

Project ID	Project Title	Supervisor
RSD-10	Optimising Knowledge Management and Information Systems for Improved Business Processes in Non-Profits	Rajesh Singh Dhillon

AC-01: Analysis of communities

This project requires students to analyze the relationship patterns among members of an online community. Members therein may transcend geographical and cultural boundaries but are bound together to pursue mutual goals or interests. The goal of this project is to study how members are brought together, and how they co-create content for the community. Students undertaking this project need to be conversant with the use of a web crawler.

AC-02: Analysis of user-generated content

The advent of Web 2.0 has promoted active user participation. Users can now easily contribute their own content, as well as comment on others'. This project requires students to collect and analyze user-generated content. The goal is to identify themes in the content and examine the interaction patterns among users. Students undertaking this project need to be familiar with web crawling and content analysis.

AC-03: Deception on social media

Deceptions on social media have become increasingly prevalent. This project seeks to better understand the ways in which deceptions present themselves, and how users can fall prey into these deceptions. Students undertaking this project need to be familiar with basic statistical techniques.

AC-04: Rumors and rumor denials

With the rise of the Internet, false rumors are ubiquitous. As a way to combat falsehood, some users and organizations develop rumor denial messages. For rumor denials to be effective, they must be shared. This project studies the factors which affect the virality of rumor denials. Students undertaking this project need to be familiar with basic statistical techniques.

AH-01   Any issues/topics in Singapore

AH-02   Public health issues in new media

AH-04   Design thinking at work

Please email the lecturer at adrian.heok@ntu.edu.sg to enquire if interested.

Lecturer and students will develop the topic together.

BK-01: Leading through stories

Howard Gardner says that every great leader is a great storyteller. Much of this great storytelling skill is evident in the speeches of the great leader. In this project, students will select a notable woman leader in business or in politics, and study her speeches over the course of her leadership. The goal of the study is to determine the extent of the leader's story use, uncover the types of story that the leader tells, and if possible, examine the effects of story choice on leadership.

BK-02: Leadership through storytelling

Howard Gardner says that every great leader is a great storyteller. Much of this great storytelling skill is evident in the way the great leader communicates, whether orally or in writing or in some other form. In this project, students will select a notable leader, whether in business or in politics, and study his various modes of communication in the context of his leadership. The goal of the study is to determine the leader's use of storytelling in his leadership.

BK-03: Storytelling in speechmaking for an occasion

This project will analyse the use of storytelling in speechmaking for one type of occasion. Students keen on this project will focus on a select group of leaders who are well-known for their speeches. The goal of the project is to uncover story types and storytelling strategies used by great speakers for that occasion of choice.

BK-04: Storytelling in speechmaking during a crisis

This project will analyse the use of storytelling in speechmaking during a crisis, whether personal or organisational. Students keen on this project will focus on a number of leaders in business and/or in politics, and study the stories they tell in their speeches to frame/reframe the crisis. The goal of the project is to uncover story types and storytelling strategies used by leaders during times of crisis.

BK-05: Leading in a crisis through stories

Howard Gardner says that every great leader is a great storyteller. Much of this great storytelling skill is evident in the way the great leader communicates, whether orally or in writing or in some other form. In times of crisis, the leader's skill in using storytelling as a communication tool becomes all the more critical.

In this project, students will take the climate change as a crisis under study, select key leaders from various spheres of influence, and study the stories they tell in various modes of communication for climate change. The goal of the study is to survey the development of the climate change story as it emerges and evolves to its current status.

BK-06: Virality of Stories

Students keen on this project will collect a repertoire of stories fulfilling a range of characteristics from a particular domain of their interest, and conduct a survey on the type of story that is most- shared. The goal of the project is to determine the factors that promote virality of stories.

BK-07: Storytelling on Video

Students keen on this project will take a story filmed on video that has attracted a significant amount of traffic, and analyse the attitudinal response of viewers to the story from the comments posted on major social media platforms. The goal of the project is to determine story impact and uncover storytelling strategies used in the video that have contributed to its virality, and if possible, measure the subjective effect of the emotional value of the story on the viewers in objective terms.

Students can select more than one video on a particular topic.

BK-08: Leadership in Literature

According to Shoup and Hinrichs (2020), great literature can serve as tutors and mentors in the ways of leadership, equipping leaders and managers with the knowledge and skills to navigate the drama of leadership and engage in meaningful sensemaking to help organizations thrive. The plot and characterizations in novels, novellas, and short stories can act as simulations of real-world situations, fostering empathic growth and prosocial behavior in real-world interactions, equipping readers to properly and adequately handle the often-tangled knot of real-life problems and personalities and improve their social-inference skills.

Students keen on this project will read fiction drawn from the canon of great literature, and elicit key insights useful for effective, empathetic, and ethical leadership.

BL-01: The Social Context of Libraries and Librarians

Libraries and librarians are integral parts of a wider social landscape which shapes and filters their image, policies and general discourse. This project would see students examine some aspect of the relationship with libraries, past or present, and this wider environment.

BL-02: Understanding Wikipedia as a social technology

Wikipedia is much maligned in information studies circles as an inaccurate and even dangerous source of information. However, those studies which have been done suggest that its accuracy is comparable to more traditional encyclopedias. What is perhaps of more interest is the social dynamics of the organization as it represents a novel and collective approach to the dissemination of knowledge. Students undertaking projects in this area would examine, with the aid of the instructor, various aspects of these dynamics.

BL-03: Domain analysis of academic disciplines or sub-disciplines

Knowledge is generated by people working within various disciplinary traditions. The study of these traditions is important in order to develop a deeper theoretical and practical understanding of how people look for and use information. The domain analytic approach is one way to study the knowledge traditions of a discipline. In this project students would apply this approach to particular academic disciplines or sub-disciplines.

CK-01: Knowledge graph or graph database application development using Neo4j

Student to propose a knowledge graph or graph database application--to develop using Neo4j graph database software and Web technologies.
Requirement: K6307 Organisation of Knowledge will be helpful but not mandatory.

CK-02: Information extraction using generative AI technology to populate a knowledge graph

One challenge of developing knowledge graph applications is that the knowledge graph is usually developed manually. This project will explore how generative AI technology can be used for extracting information to populate a knowledge graph.
Requirement: A text mining course taken previously or concurrently

DG-01: Understanding perceptions of deepfakes

This project investigates deepfakes, videos that replace a person's face with another. Studying deepfakes is important as people become more dependent on various online information services and could fall prey to misinformation. This project will study how people perceive and respond to deepfakes. Topics include the extent to which deepfakes are believable, why people fall prey to them, and how they verify the authenticity of videos.

DG-02: Designing games for deepfake identification

There are two options for this project. The first is to design an educational game to teach people about deepfakes and how to identify them. The second is to design a crowdsourcing game in which people spot deepfakes among videos found online as a warning to others about potential sources of misinformation. In both options, groups can either focus on low fidelity prototyping (using storyboarding, i.e. no programming) or high fidelity prototyping (i.e. programming). This project is thus suitable whether groups have coding skills or not.

DG-03: Understanding perceptions of safety in the metaverse

The metaverse refers to virtual/online spaces where people can create and explore with other people. Although the technology is emerging and potentially useful, concerns about safety and wellbeing are already raised by researchers, end-users and policymakers. The goal of this project is to investigate perceptions of safety about potential metaverse users and how to keep them safe from such concerns. Possible topics include identify possible harms in relation to personal safety among different groups (e.g. children or females), how to encourage safety and wellbeing, and proposing types of measures that could be taken. Research methods may include interviews, surveys and systematic literature reviews.

DG-04: AI literacy – perceptions and influential factors

Given the rise of artificial intelligence (AI) in many segments of society, it is important for people to gain AI literacy skills. Possible projects include but are not limited to notions and levels AI literacy and how they differ among age groups, factors influencing motivations to learn AI, and factors influencing perceptions of AI and its impact on society. Both qualitative (e.g. interviews) and quantitative (e.g. surveys) data collections methods are possible with this project.

DG-05: Perceptions of generative AI at work and play

Given the increasing popularity and advancement of generative AI systems like ChatGPT and Midjourney, there are concerns about how these technologies will impact people's lives and livelihoods. This project aims to investigate how people perceive generative AI in terms of benefits and risks across work, study, home and/or leisure contexts. Both qualitative (e.g. interviews) and quantitative (e.g. surveys) data collections methods are possible with this project.

FT-01: The Value and Impact on a Business' revenues through the use of Digital Proximity Solutions

Students will explore the various ways that businesses can use digital proximity solutions for marketing, customer service, etc. The students will compare how businesses in different markets approach the use of such technologies to have a positive impact on their business.

FT-02: Customer Intelligence collection methods and analysis

Students will look at the array of ways to gather customer intelligence across the various customer touch points. The focus can be on B-to-B or B-to-C business models. Students would develop a framework on what would be a good way to collect customer intelligence for different types of business models.

FT-03: Digital Transformation

Students will research how companies are transforming themselves, if at all. The focus will be on what companies' perception of digital transformation is, what it entails, and are already implementing. Students will write-up case examples as part of their final report.

FT-04: Data Analysis in the Workplace

Students will research what type and level of data analysis is being done, the expectation by companies, and the tools or software used, by employees in companies. The objective is to better understand the job skills expected of employees today and in the future. Students, through interview and surveys, come up with a list of must have skills that employees should have in the future.

FT-05: Data Analytic Tools

Students will do a comprehensive research on the tools available in the market that can be used to conduct basic and advanced data analysis. The objective is to come up with an unbiased toolkit list that can be used by companies for the varying analysis across the value-chain. The final report will be primarily based on secondary research but supplemented with user and/or customer survey.

FT-06: Intelligent Automation Solutions and Tools

Students will research the extent of interest and use of Intelligent Automation solutions in business operations. The focus will be on the awareness, interest and use of solutions and tools like Robotics Process Automation (RPA), Keyboard Automation, WebApps, Virtual Reality (VR) and Augmented Reality (AR). Students will write-up case examples as part of their final report.

HO-01: Investigating health misinformation in social media content

This project uses analytical and computational techniques to investigate health misinformation circulating on social media.

HO-02: Investigating hallucination and misinformation from large language models use

Large language models (LLMs) are powerful tools that potentially span various applications. However, issues such as misinformation and fake news tend to mislead users. Despite these issues, its utilisation in healthcare is steadily increasing. This project requires students to analyse freely accessible LLMs and understand the causes and concerns of misinformation in healthcare. This project aims for students to understand how LLMs can be implemented better for healthcare decision support.

HO-03: Improving LLMs with knowledge bases

While LLMs have significantly progressed, improvements are still needed. The size and diversity of training data and the incorporation of knowledge bases have been identified as ways to enhance the performance of LLMs. In this project, students are required to transform medical literature from databases such as PubMed or Nature into a graph database or knowledge base. The aim is for students to study the impact of knowledge bases on the performance of LLMs.

HO-04: Using LLMs to construct knowledge graph for literature-based discovery

Natural language processing has been widely used to generate knowledge graphs with causal relationships between nodes/entities. However, LLMs have shown to be capable of generating such graph databases. In this project, students are required to transform medical literature from databases such as PubMed into a graph database or knowledge base. The aim is for students to analyse the causal relationships between medical conditions found in these literature.

JP-01: Evaluating deepfake detection algorithms

This project studies and evaluates deepfake detection algorithms (including the use of the popular Transformer models). The ability to detect deepfakes is increasingly important as people increases their consumption of online materials. Deepfakes on online platforms could mislead people with negative consequence. To deal with such misinformation, many researchers have developed deepfake detection algorithms. This project involves the gathering of openly published source codes of such algorithms, the analysis and evaluation of these algorithms. Programming and knowledge of artificial intelligence algorithms will be the prerequisites.

JP-02: Security Audit using LLM

This project involves the development of audit tools that perform cyber security audit using Large Language Models (LLM). Working prototypes and academic report are the expected deliverables for this project. Some knowledge of cyber security will be the prerequisites. The project will provide an opportunity to learn about prompt engineering with LLM.

JS-01: Perception and use of libraries

Nowadays, individuals often turn to sources beyond libraries for their information needs. This project aims to study the perception and use of libraries by a specific group (e.g., adolescents, parents, etc.). Researchers may also focus on a particular type of library (e.g., public, school, or academic libraries). The goal is to identify how libraries can improve and promote their services. The study may examine: How do individuals perceive and use libraries and other sources such as social media platforms? What library services are most valuable to the user group? What services do users want the library to provide or enhance? What are the demographic, cognitive, affective and contextual factors that contribute to use or non-use?

JS-02: Everyday life information behaviour

The advent of social media and mobile communication has led to an explosion of information being disseminated through many channels. How do individuals stay informed about daily happenings and topics of interest to them? Researchers may focus on a specific demographic group and investigate some of the following areas: Everyday information needs and information barriers; information behaviour on social media; information overload; credibility assessment; or factors affecting users' everyday life information behaviour.

JS-03: Information inequality: Status, effects, and remedies

Recent technological development has not mitigated the unequal access and use of information resources among different user groups. It may even have exacerbated the digital and information divide. In this project, researchers may study specific demographic groups, types and channels of information (e.g., health information, printed materials, the Internet), and geographic scopes. The study may focus on: mapping and charting the status and changes in information inequality; identifying the factors that contribute to unequal access and usage; examining the effects of information inequality on different groups; or exploring practices and policies that address information gaps.

JS-04: Trending topics in Library and Information Science

Research in Library and Information Science (LIS) plays an important role in informing the effective provision of up-to-date library and information services. This topic explores the subjects and issues central to LIS and its subfields. The research may focus on: longitudinal changes in topics discussed in Singapore and worldwide; changing usage of theories and methods in LIS research; and differences in topics covered by scholarly publications and informal channels such as social media.

LCK-01: Porting the arXif dataset into Neo4j

The arXif dataset contains the metadata of over 1.7 million scholarly papers. In this project, students will study the arXif dataset (downloadable from https://www.kaggle.com/datasets/Cornell-University/arxiv and write a Python program to port the data over to a graph database (specifically, the Neo4J database). We will then use the Neo4j database to perform graph theoretic analysis on the collaboration/co-authorship graph.

LCK-02: Porting the movies dataset into Neo4j

The Movies dataset contain the metadata of 45,000 movies. In this project, students will study the Movies dataset (downloadable from https://www.kaggle.com/datasets/rounakbanik/the-movies-datasetand write a Python program to port the data over to a graph database (specifically, the Neo4J database). We will then use the Neo4j database to perform graph theoretic analysis on the dataset.

LCK-03: Vertical farming: A bibliometric analysis

Vertical farming involves growing plants indoors in multi-storied structures. LED lighting is used to control growth and nutrition is carefully monitored. In this project, we will perform a bibliometric analysis of the academic literature of vertical farming.

LCK-04: Storage of Family Tree Information Using Neo4J

In this project, students will explore two things:
1. the possibility of using Neo4J for the storage and retrieval of information related to family trees
2. the visualisation of family trees on the Web using the Django web framework

The deliverable is a basic website that displays family configurations.

LCK-05: Storage of Research Publications Using Neo4J

In this project, students will explore two things:
1. the possibility of using Neo4J for the storage and retrieval of bibliometric information related to academic publications (journal papers, conference papers and monographs)
2. the visualisation of collaborative patterns on the Web using the Django web framework

The deliverable is a basic website that displays collaborative patterns between academics.

The two projects have some overlaps, and the two groups working on the projects are encouraged to collaborate. For more information, please email me at ascklee@ntu.edu.sg.

LCS-01: Social Media for Teaching and Learning

LCS-02: Investigating Crowdsourcing

LCS-03: Making sense of social media data

LCS-04: Effects of Cute Aesthetics Interface Design

> Please email the faculty at leecs@ntu.edu.sg to enquire if interested.

LGP-01: Case study of sustainability informatics in organizations

LGP-02: Perceptions and expectations of climate change: A survey

LGP-03: Survey of sustainability information management in organizations

LGP-04: Use of generative artificial intelligence (AI) in organizations

LGP-05: Use of generative artificial intelligence (AI) by professionals

> Please email the faculty at peelg@ntu.edu.sg to enquire if interested.

NJC-01: Sentiment Analysis of Social Media Content

Sentiment analysis is a type of subjectivity analysis which analyses sentiment in each textual unit with the objective of understanding the sentiment polarities (i.e., positive, negative, or neutral) of the opinions toward various aspects of a subject. The CI group will investigate sentiment analysis of user generated content using machine learning algorithms. Especially, the CI group will explore aspect-based sentiment analysis of social media content using a deep learning approach. Text/Data mining and computer programming skills are required for the project.

NJC-02: Analysis of Online Discussions about Emerging Subjects in Singapore

(check with supervisor for more information)

NPS-01: Understanding the library trends in post-pandemic period

Information about the CI project: The impact of the COVID-19 pandemic on library services has been significant, and these changes are still ongoing. Libraries face a fundamental shift that will extend far into the future and beyond the pandemic. This project requires students to analyse the current technological trends and how it can be mapped to the different libraries, including public and academic libraries. The goal of this project is for students to survey and understand what technological trends are important to patrons and librarians. The results will need to be analysed and assessed on how it can be fed into the Library Management System.

NPS-02: Ensuring Accessibility in Libraries: Strategies and Tools for Providing Equitable Access to Information and Services

The paper should cover:
- What accessibility means in the context of libraries and library systems, including the importance of ensuring that all members of a community have equal access to information and services.
- The barriers that people with disabilities may face in accessing library resources, including physical barriers (such as stairs or narrow aisles) and digital barriers (such as inaccessible websites or online resources).
- Strategies and best practices for ensuring accessibility in libraries, such as creating accessible physical spaces, providing assistive technology and devices, and designing accessible websites and online resources.
- Examples of successful accessibility initiatives in libraries, and the impact these initiatives have had on patrons with disabilities.
- The role of librarians and library staff in promoting accessibility, including the importance of training and education on accessibility issues.

Overall, this topic would allow students to explore the ways in which libraries can promote equity and inclusion by prioritizing accessibility and ensuring that everyone has equal access to information and services.

RSD-01: The Role of Knowledge Management and Information Systems in Humanitarian Assistance: Case Studies from the AHA Center

This project examines the role of KM and IS in enhancing the effectiveness of humanitarian assistance, using case studies from the AHA Centre. Students will analyse how KM and IS practices contribute to disaster preparedness, response, and recovery. The research involves identifying key strategies, evaluating their impact, and proposing improvements. Ethical concerns specific to humanitarian contexts should be addressed.

- Focus for Project: working together with the ASEAN coordination centre for humanitarian assistance on disaster management (in Jakarta) www.AHAcentre.org) MSIS students can explore database management, system security, and mobile applications, while KM students should focus on knowledge transfer and organisational learning.

RSD-02: Knowledge Management and Information Systems Strategies for Disaster Relief Operations: Lessons from the ASEAN Experience

This project focuses on developing and implementing KM and IS strategies for disaster relief operations, drawing lessons from the ASEAN experience. Students will analyse KM and IS practices applied in various disaster scenarios, evaluating their effectiveness. The research involves data collection, critical assessment, and proposing improvements and working together with the ASEAN coordination centre for humanitarian assistance on disaster management (Jakarta) www.AHAcentre.org).

- Focus for Project: MSIS students can explore network programming, data mining, and internet programming, while KM students can focus on knowledge audits and best practices repositories.

RSD-03: Innovative Knowledge Management and Information Systems Approaches for Humanitarian Assistance and Disaster Response

This project investigates innovative KM and IS approaches that can enhance humanitarian assistance and disaster response efforts. Students will analyse various KM and IS tools and techniques used in emergencies, evaluating their impact. The research includes developing a research proposal, data collection, and analysis.

- Focus for Project: working together with the ASEAN coordination centre for humanitarian assistance on disaster management (www.ahacentre.org - jakarta) MSIS students can focus on information systems security and blockchain technologies, while KM students can emphasize knowledge fusion (multi national) strategies and organisational learning.

RSD-04: Building Resilient Knowledge Management and Information Systems in Non-Profit Organisations

This study focuses on building resilient KM and IS systems in non-profit organisations, students can work with SPCA, SPD, and ASEAN-related entities. For example like (https://spca.org.sg/, https://www.spd.org.sg/ https://savh.org.sg/ https://asean.org/ https://ahacentre.org/) or an organisation of their choice

Students will explore how these organisations manage and utilise knowledge and information to enhance their resilience and effectiveness. The project involves critical analysis, data collection, and development of a theoretical framework.

Focus for Project: MSIS students can explore data analysis, security policies, and system integration, while MSc in KM students can focus on knowledge audits, organisational enablers, and knowledge management technologies.

RSD-05: Evaluating Gaps in KM ISO 30401 and Recommended Improvements for the Future of Knowledge Management

This research study will delve into the Knowledge Management (KM) standard ISO 30401, identifying its current gaps and proposing improvements to align with future trends in KM. Students will critically analyse the standard, review existing literature, and gather insights from KM professionals. The project aims to develop a comprehensive understanding of how ISO 30401 can be enhanced to better support organisations in managing knowledge assets. The practical implications of the proposed improvements will be examined. Students will work with the KM Global network team on this, (https://www.kmglobalnetwork.org)
Focus for Project: MSIS students should explore the technological aspects of implementing ISO 30401 standards, such as systems integration and data management, while KM students should focus on theoretical frameworks, knowledge processes, and organisational impacts.

RSD-06: Enhancing Operational Efficiency and Impact in Non-Profit Organisations through Knowledge Management and Information Systems

This project explores how sustainable knowledge management (KM) and information systems (IS) practices can enhance operational efficiency and impact in non-profit organisations. Students will identify critical KM and IS practices that support non-profit missions, examining case studies to understand successful implementations. The project involves evaluating the effectiveness of these practices, developing a theoretical framework, and proposing best practices.

- Focus for Project: Students from MSIS can explore areas such as software development, database systems, and human-computer interaction relevant to non-profits, while KM students can focus on knowledge generation, codification, and transfer.

RSD-07: Integrating DEI Initiatives in Knowledge Sharing and Information Systems within Humanitarian Organisations or academia sector

This study explores the integration of Diversity, Equity, and Inclusion (DEI) initiatives in KM and IS practices within humanitarian organisations or academia sector. Students will examine how DEI policies influence knowledge sharing and collaboration. The project includes developing a research proposal, data collection, and analysis. Ethical considerations related to DEI in KM and IS will be a key focus.

- Focus for Project: MSIS students can focus on user experience design and usability engineering, while KM students can emphasize KM Strategy, social network analysis and organisational enablers.

RSD-08: The Importance of Tacit Knowledge for the Future of Work: A Comprehensive Study

This research study will investigate the critical role of tacit knowledge in the future of work. Students will explore how tacit knowledge, which includes skills, experiences, and insights that are not easily codified, contributes to organisational success. The study will involve reviewing literature, conducting interviews with industry professionals, and analysing case studies. The project aims to highlight strategies for capturing and leveraging tacit knowledge to enhance innovation and competitiveness. Ethical considerations in managing and sharing tacit knowledge should also be addressed.

- Focus for Project: MSIS students should focus on technological tools and platforms for capturing and sharing tacit knowledge, such as collaboration software and knowledge bases, while KM students should emphasize the theoretical aspects, such as knowledge transfer, organisational culture, and learning environments.

RSD-09: Leveraging Knowledge Management and Information Systems for Effective Business Processes in Non-Profit Sectors

This study investigates how KM and IS can streamline and enhance business processes in non-profit organisations. Students will identify inefficiencies and propose KM and IS solutions to address these gaps. The project includes a critical evaluation of existing literature, methodological design, data collection, and analysis, aiming to produce guidelines and strategies for improved process efficiency.

- Focus for Project: MSIS students can focus on system design, software engineering, and project management, while KM students can emphasize knowledge strategies and implementation.

RSD-10: Optimising Knowledge Management and Information Systems for Improved Business Processes in Non-Profits

This research explores the optimisation of KM and IS to enhance business processes in non-profit organisations. Students will identify key areas where KM and IS can drive efficiency, using case studies and existing research. The project involves developing a theoretical framework, methodological design, data collection, and recommendations for best practices.

- Focus for Project: MSIS students can focus on software project management and enterprise applications development, while KM students can emphasize knowledge strategy, knowledge flows and management of knowledge assets.

NTU Email Addresses of Supervisors

Name	Email
Alton Chua	altonchua@ntu.edu.sg
Adrian Heok	adrian.heok@ntu.edu.sg
Brenda Lee	brendalee@ntu.edu.sg
Brendan Luyt	brendan@ntu.edu.sg
Chris Khoo	assgkhoo@ntu.edu.sg
Dion Goh	ashlgoh@ntu.edu.sg
Francis Tay	francistay@ntu.edu.sg
Hamzah Bin Osop	hamzah.osop@ntu.edu.sg
Jonathan Pan	jonathanpan@ntu.edu.sg
Joanna Sin	joanna.sin@ntu.edu.sg
Lee Chu Keong	ascklee@ntu.edu.sg
Lee Chei Sian	leecs@ntu.edu.sg
L. G. Pee	peelg@ntu.edu.sg
Na Jin Cheon	tjcna@ntu.edu.sg
Nirmal Prabu S/O Sangar	nirmalprabu@ntu.edu.sg
Rajesh Singh Dhillon	rajesh.dhillon@ntu.edu.sg