



FUNDAMENTALS OF LEARNING AND INFORMATION PROCESSING

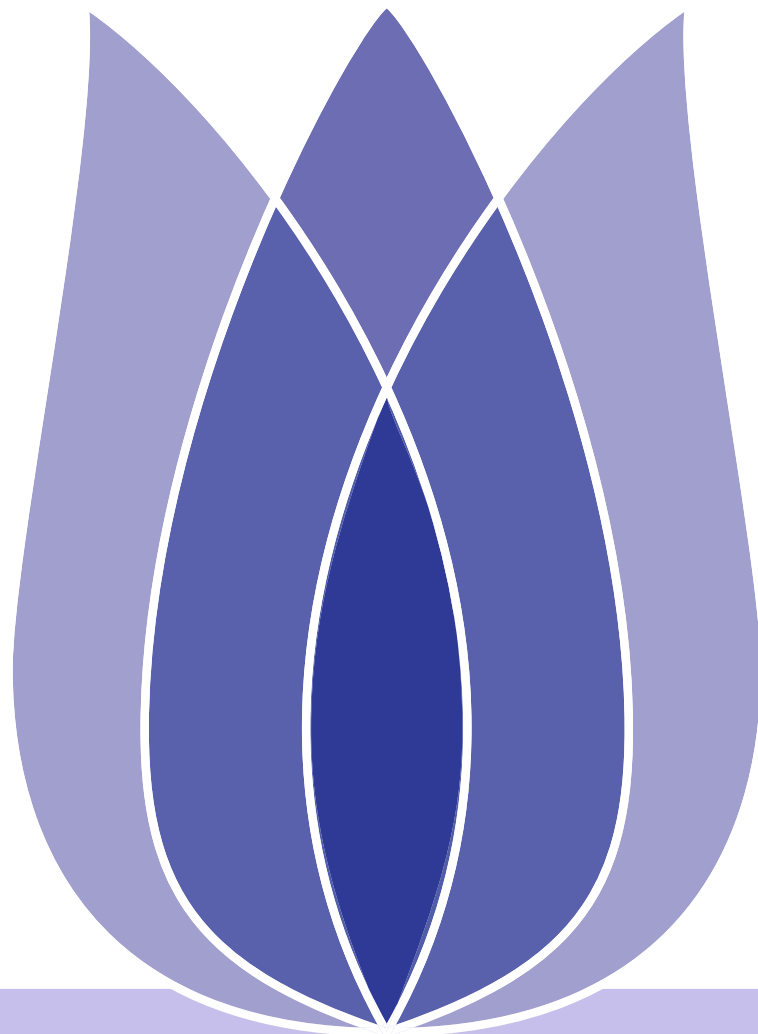
# SESSION 20: TULIP APPROACH TO RESEARCH (I)



Gang Li

Deakin University, Australia

2024-03-19





# Table of Content

- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)
- [Road to Success](#)

## TULIP Academy

- Whom am I?
- Deakin University
- TULIP Lab

## NEXUS

- NEXUS Training
- Outstanding Alumni

## Starting NEXUS Training

- Recommended Timeline
- NEXUS Resources
- Pre-NEXUS Skills
- Do* and *Do Not*

## Road to Success



TULIP Academy

Whom am I?

Deakin University

TULIP Lab

NEXUS

Starting NEXUS Training

Road to Success

# TULIP Academy

# Whom am I?

TULIP Academy

Whom am I?

Deakin University

TULIP Lab

NEXUS

Starting NEXUS Training

Road to Success

## ■ Professor Gang Li

### ◆ Deakin University

- *University Academic Board Member*
- *University Thesis Examination Committee*
- *Cyber Analytics & AI leader, Deakin CREST*
- *Deputy Director, Deakin D2I*

### ◆ Academic Services

- IEEE Technical Committee
  - ◆ Task Force on *Educational Data Mining*, (Chair 2020-)
  - ◆ *Data Mining and Big Data Analytics*, (Vice Chair 2017-2019)
  - ◆ *Enterprise Information Systems*
  - ◆ *Enterprise Architecture and Engineering*
- IJCAI, AAAI several times as *Area Chair*
- PAKDD, ACML as *Senior PC*
- KSEM, ATIS as *Steering Committee member*
- DSS, IT&T, TM, JTR, APJTR as *Associate Editor*
- Cyber Security, DSS, JIKM, JIFS, IEEE Access as *Associate Editor*



**TULIP**

*Team for Universal Learning and Intelligent Processing*



Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)





Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)
- Ranked in the **Top** 50 young universities in the world (*QS and Times Higher Education*)





Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)
- Ranked in the **Top** 50 young universities in the world (*QS and Times Higher Education*)
- Ranked in the World **Top** 50 – 75 in *Computer Science and Engineering*, the **4th** in Australia (*Shanghai Rankings 2023*)





Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)
- Ranked in the **Top** 50 young universities in the world (*QS and Times Higher Education*)
- Ranked in the World **Top** 50 – 75 in *Computer Science and Engineering*, the **4th** in Australia (*Shanghai Rankings 2023*)
- Ranked **#1** in Victoria for student satisfaction for the last 11 years (*Australian Graduate Survey*)





Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)
- Ranked in the **Top** 50 young universities in the world (*QS and Times Higher Education*)
- Ranked in the World **Top** 50 – 75 in *Computer Science and Engineering*, the **4th** in Australia (*Shanghai Rankings 2023*)
- Ranked **#1** in Victoria for student satisfaction for the last 11 years (*Australian Graduate Survey*)
- **#1** university in Australia for *education experience (2019 Student Survey)*



Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

## Major Rankings.

- Among the **top** 1 % of universities worldwide (*Shanghai Rankings*)
- Ranked in the **Top** 50 young universities in the world (*QS and Times Higher Education*)
- Ranked in the World **Top** 50 – 75 in *Computer Science and Engineering*, the **4th** in Australia (*Shanghai Rankings 2023*)
- Ranked **#1** in Victoria for student satisfaction for the last 11 years (*Australian Graduate Survey*)
- **#1** university in Australia for *education experience* (*2019 Student Survey*)
- **#1** university in Australia for *careers service*(*Australian Graduate Recruitment Industry Awards*)





👍 Among the **top** 1 % of universities worldwide, *Computer Science* ranked the **4th** in Australia

Table 1: Major Rankings of Deakin University

	Benchmark	2014-2015	2015-2016	2016-2017	2017-2018
ARWU	World National	301-400 12-19	201-300 9-14	201-300 11-14	201-300 10-15
CWTS Leiden	World National	284 11	325 17	314 17	226 11
QS#	World National	360 19	324 17	355 19	293 17
THE	World National	301-350 13-15	301-350 18-19	251-300 12-18	301-350 17-21
THE<50	World National	45 6	50 8	43 8	50 8

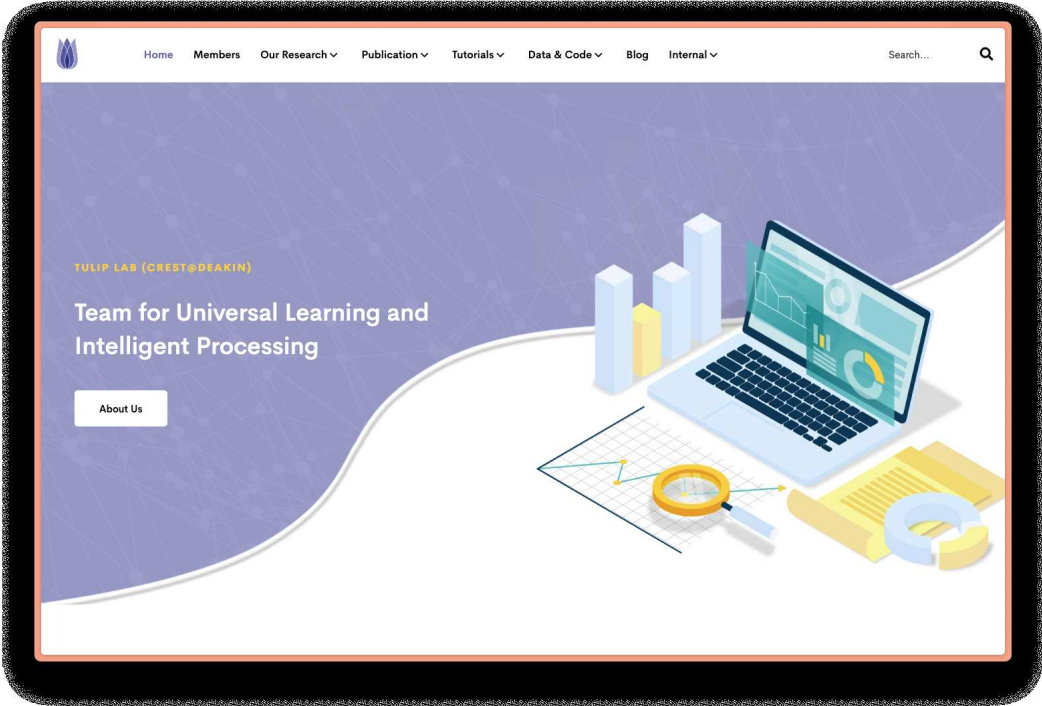
<https://www.australianuniversities.com.au/rankings/>





# Team for Universal Learning and Intelligent Processing

- TULIP Academy
- Whom am I?
- Deakin University
- TULIP Lab
- NEXUS
- Starting NEXUS Training
- Road to Success



👍 Focus on Intelligent Techniques

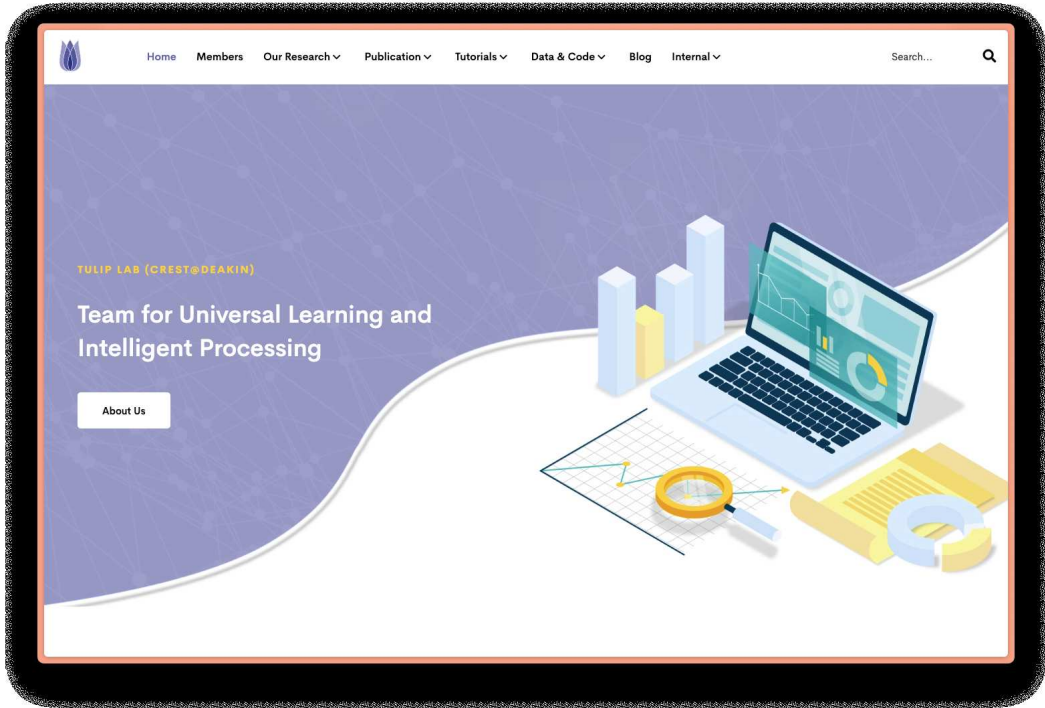
*Research Areas.*

**Artificial Intelligence** automate various intelligent tasks using advanced algorithms



# Team for Universal Learning and Intelligent Processing

- TULIP Academy
- Whom am I?
- Deakin University
- TULIP Lab
- NEXUS
- Starting NEXUS Training
- Road to Success



👍 Focus on Intelligent Techniques

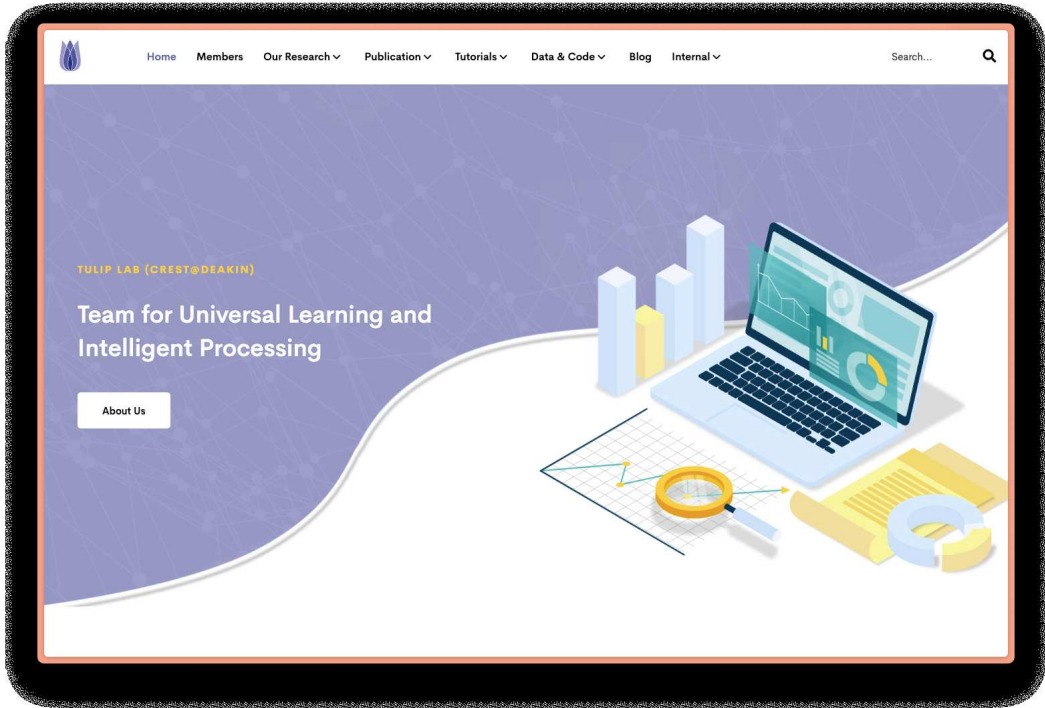
*Research Areas.*

**Artificial Intelligence** automate various intelligent tasks using advanced algorithms  
**Privacy & Security** Cyber-security and How to preserve the privacy of individuals while analyzing the data



# Team for Universal Learning and Intelligent Processing

- TULIP Academy
- Whom am I?
- Deakin University
- TULIP Lab
- NEXUS
- Starting NEXUS Training
- Road to Success



👍 Focus on Intelligent Techniques

*Research Areas.*

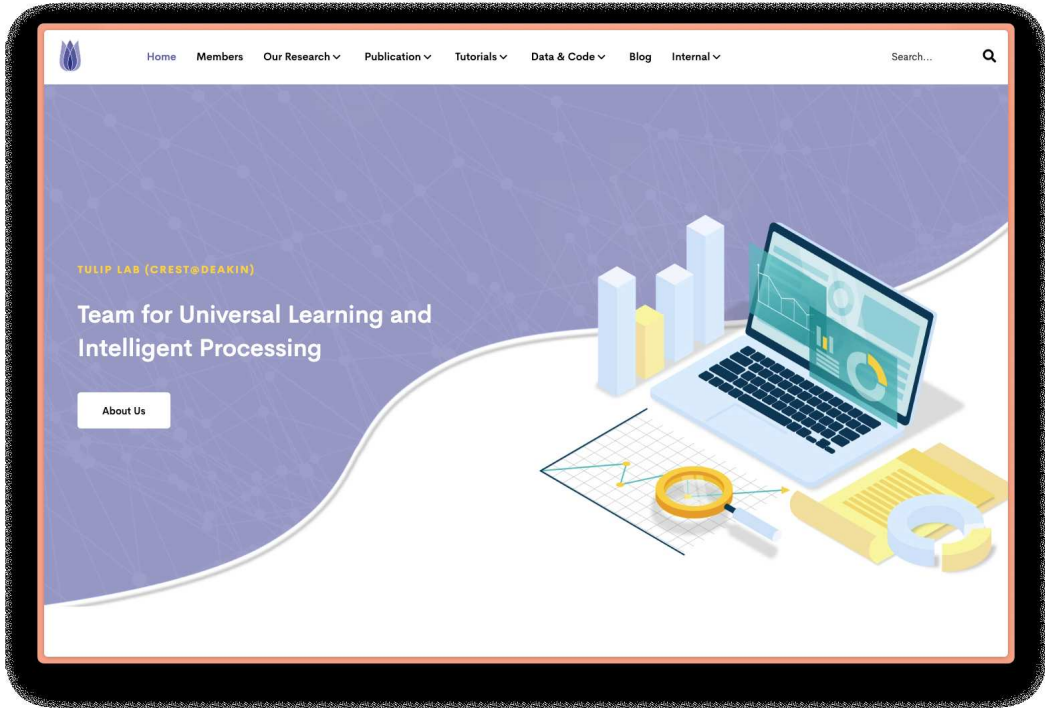
- Artificial Intelligence** automate various intelligent tasks using advanced algorithms
- Privacy & Security** Cyber-security and How to preserve the privacy of individuals while analyzing the data
- Business Intelligence** support business decision-making using data science and artificial intelligence.





# Team for Universal Learning and Intelligent Processing

- TULIP Academy
- Whom am I?
- Deakin University
- TULIP Lab
- NEXUS
- Starting NEXUS Training
- Road to Success



 Focus on Intelligent Techniques

Research Areas.

- Artificial Intelligence** automate various intelligent tasks using advanced algorithms
- Privacy & Security** Cyber-security and How to preserve the privacy of individuals while analyzing the data
- Business Intelligence** support business decision-making using data science and artificial intelligence.
- AI Applications** AI and data science applications in various domains





# Web Resources

TULIP Academy
Whom am I?
Deakin University
TULIP Lab
NEXUS
Starting NEXUS Training
Road to Success

## Official Websites

- **G:** Google Scholar
- **🏠:** <https://www.tulip.org.au>
- **🐱:** <https://github.com/tulip-lab>

## Social Media

- **🐦:** Twitter
- **👤:** Reddit
- **in:** Linkedin



# NEXUS Research Training Program

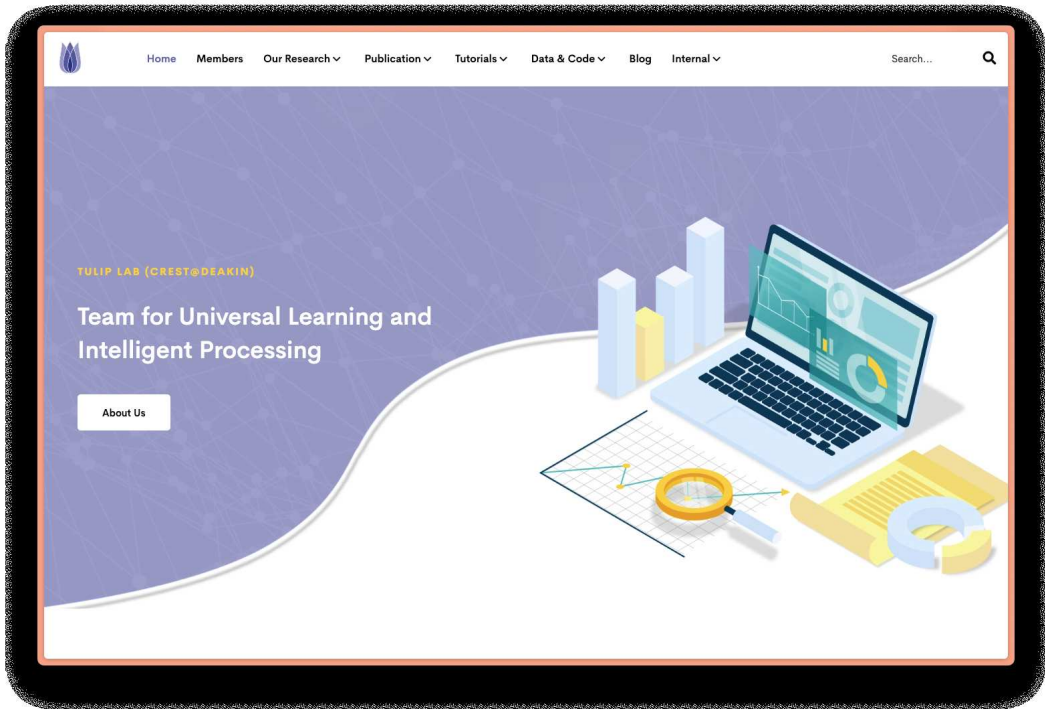


# NEXUS Research Training @ TULIP

- TULIP Academy
- NEXUS
- NEXUS Training
- Outstanding Alumni
- Starting NEXUS Training
- Road to Success



## Igniting Innovation, Cultivating Minds: *where Research Excellence Begins*



- The Student Researcher Internship offers more opportunities for students to work on **high impact and critical research projects**.



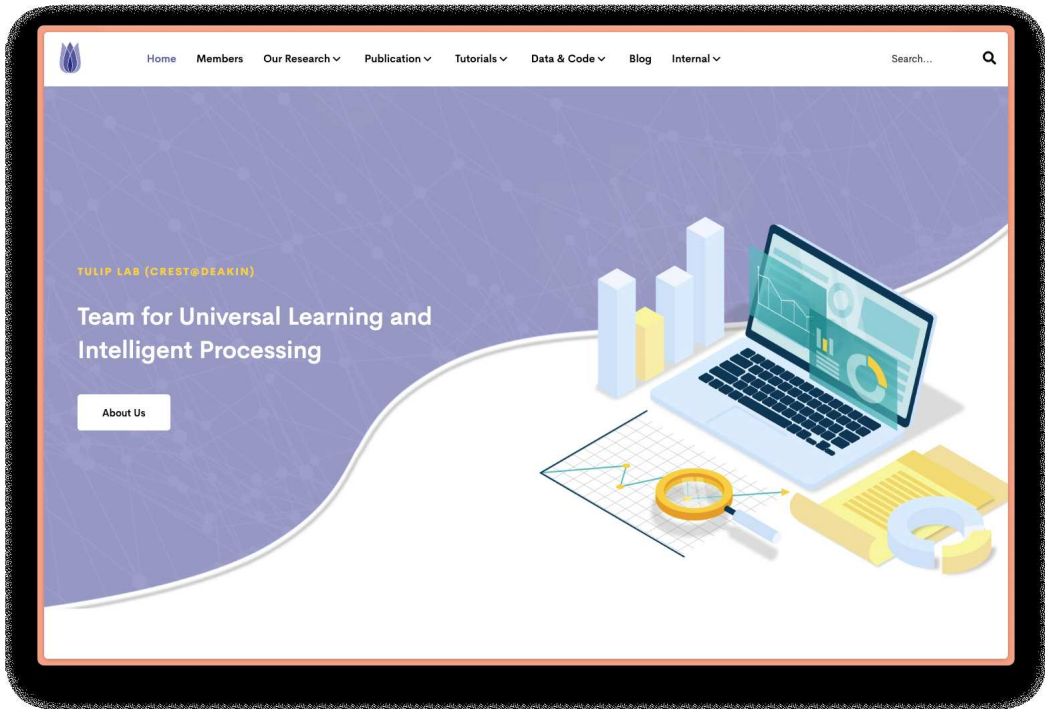


# NEXUS Research Training @ TULIP

- TULIP Academy
- NEXUS
- NEXUS Training
- Outstanding Alumni
- Starting NEXUS Training
- Road to Success



## Igniting Innovation, Cultivating Minds: *where Research Excellence Begins*



- The Student Researcher Internship offers more opportunities for students to work on **high impact and critical research projects**.
- It allows opportunities **beyond the limitations** of traditional internship program on aspects such as *duration, time commitment, and working location*.

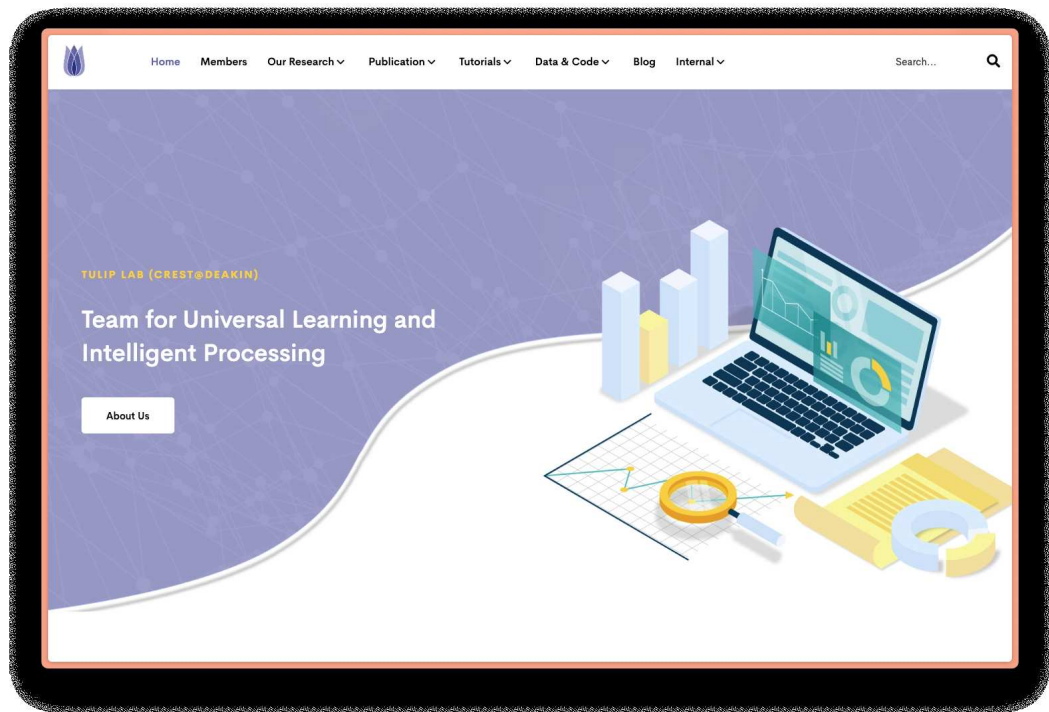


# NEXUS Research Training @ TULIP

- TULIP Academy
- NEXUS
- NEXUS Training
- Outstanding Alumni
- Starting NEXUS Training
- Road to Success



## Igniting Innovation, Cultivating Minds: *where Research Excellence Begins*



- The Student Researcher Internship offers more opportunities for students to work on **high impact and critical research projects**.
- It allows opportunities **beyond the limitations** of traditional internship program on aspects such as *duration, time commitment, and working location*.
- You have no obligation to join us after the internship, and we will encourage you to apply for PhD scholarship from world-leading universities.





# NEXUS Training Stages







# NEXUS Training Stages





# NEXUS Training Stages








# NEXUS Outstanding Alumni


- [TULIP Academy](#)
- [NEXUS](#)
- [NEXUS Training](#)
- [Outstanding Alumni](#)
- [Starting NEXUS Training](#)
- [Road to Success](#)




University of Pennsylvania (Wharton) is ranked global **No. 3 in Best Business Schools.**



**Daniel Gao (He/Him)**  
Australian Delegate to G20 Youth || Student at the Wharton School




**Research Intern under Dr. Gang Li**  
Deakin Research · Internship  
Mar 2021 - Sep 2022 · 1 yr 7 mos  
Melbourne, Victoria, Australia  
  
Data-mining and data visualisation for PhD candidates at TULIP-lab






**Intern**  
Anthony Raso & Associates  
Jan 2020 - Feb 2020 · 2 mos  
Melbourne, Victoria, Australia · On-site





**Education**








**The Wharton School**  
Finance & Business Economics and Public Policy  
Activities and societies: Penn Undergraduate Capital Partners (Project Lead/Sourcing Analyst), Moso Capital (Investment Analyst), Social Impact Consulting (Consultant)

Impact Factor: **5.1** / 5-Year Impact Factor: **4.4**

 Available access |  Research article |  First published online December 1, 2022

**Value creation in wine tourism – an exploration through deep neural networks**  
[Daniel Gao](#)  [Haiyang Xia](#)   [Rob Law](#)  [View all authors and affiliations](#)  
[OnlineFirst](#) | <https://doi-org.ezproxy-b.deakin.edu.au/10.1177/13567667221140605>

 Contents |  PDF / ePub |  Cite article |  Share options |  Information, rights and permissions

**Abstract**

The aim of this paper is to explore what aspects create experiential value for wine tourists. We synthesize the extant literature into four dimensions for wine tourism value creation, namely, product-related aspects; sensory and affective experiential aspects; cognitive, educational experiential aspects; and social-relational experiential value-creating aspects. So far, most studies merely discuss product-related aspects whilst insights on experiential value are less known. Using online review data from wine tourists in Australia, we develop a novel deep neural network-based framework using an innovative AI-based exploratory design. Results of the case study reveal that in addition to product-related aspects, sensory-and education-related experiential aspects are also highly important for value creation in wine tourism. Theoretical and practical implications, as well as ideas for future research are discussed.



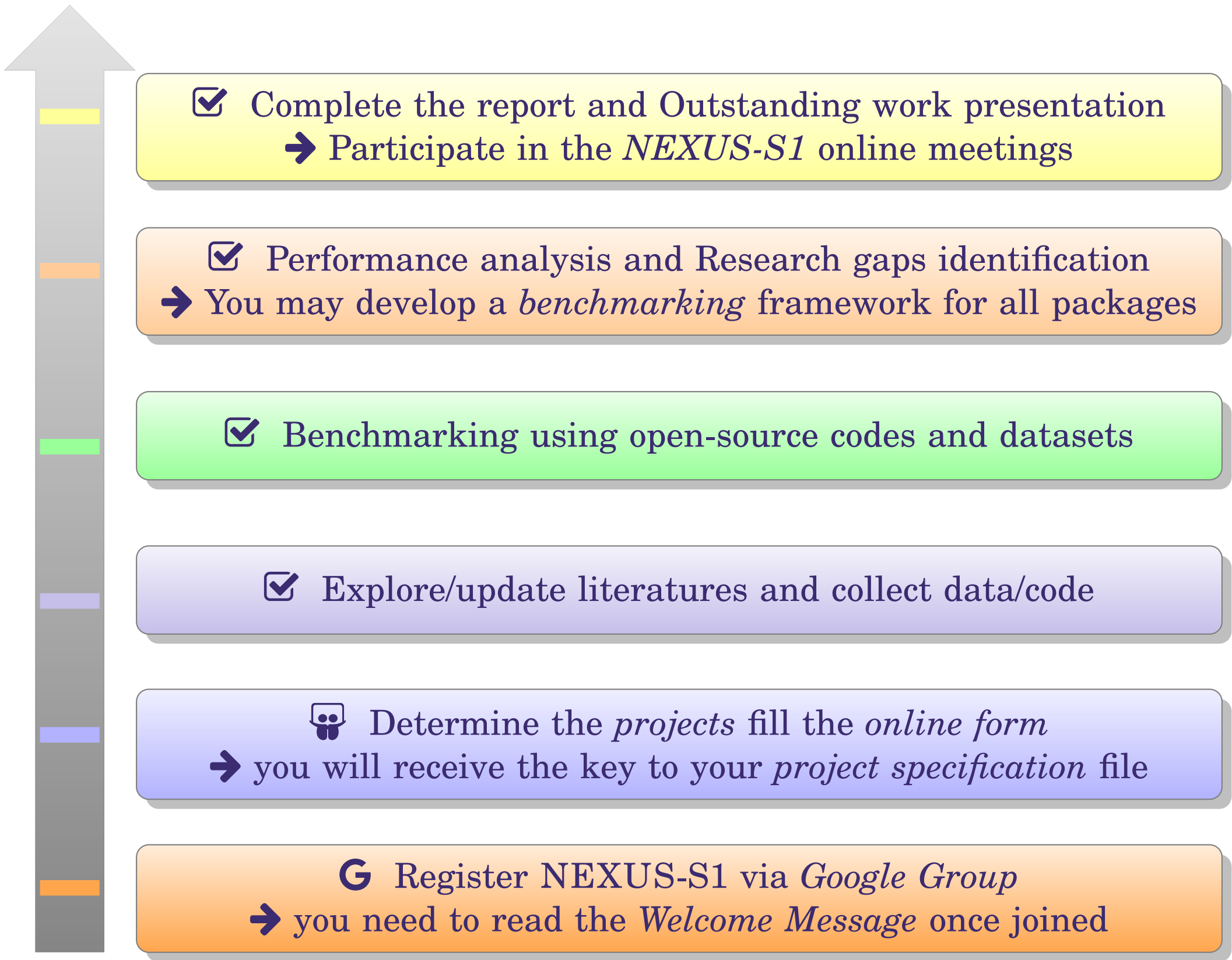
- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)**
- [Recommended Timeline](#)
- [NEXUS Resources](#)
- [Pre-NEXUS Skills](#)
- [Do and Do Not](#)
- [Road to Success](#)

# Starting NEXUS Training



# NEXUS-S1 Recommended Timeline

- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)
- [Recommended Timeline](#)
- [NEXUS Resources](#)
- [Pre-NEXUS Skills](#)
- [Do and Do Not](#)
- [Road to Success](#)








- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)
- [Recommended Timeline](#)
- [NEXUS Resources](#)
- [Pre-NEXUS Skills](#)
- [Do and Do Not](#)
- [Road to Success](#)

## Repositories

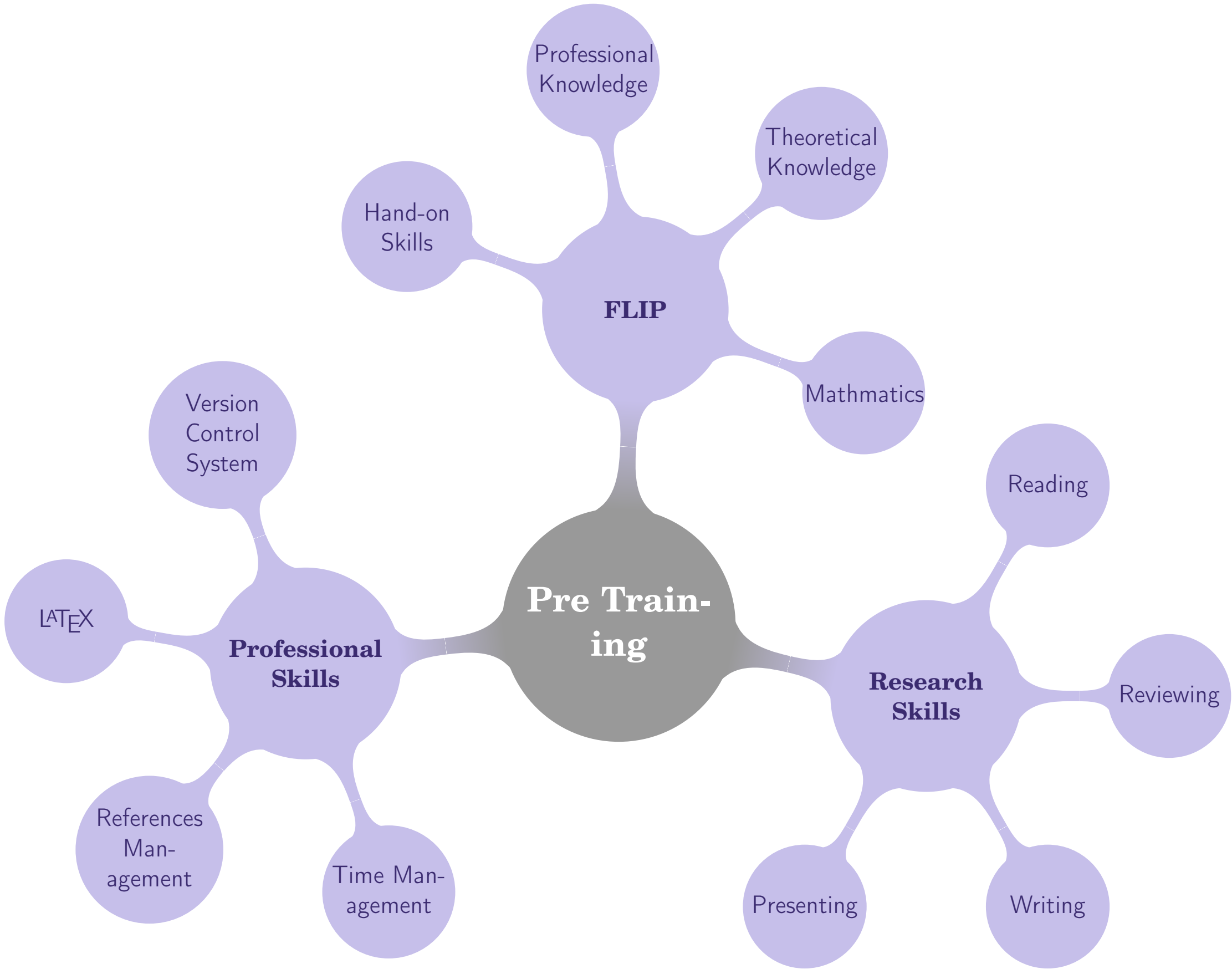
-  TULIP-LAB Resources
-  TULIP-LAB Open-Projects

## Services

-  NEXUS-S1
-  NEXUS-S2
-  NEXUS-S3



- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)
- [Recommended Timeline](#)
- [NEXUS Resources](#)
- [Pre-NEXUS Skills](#)
- [Do and Do Not](#)
- [Road to Success](#)







# Do and Do Not

- TULIP Academy
- NEXUS
- Starting NEXUS Training
- Recommended Timeline
- NEXUS Resources
- Pre-NEXUS Skills
- Do and Do Not**
- Road to Success



## DO

- Be *proactive*
- Read More, Write More
- Find resources and tools proactively
- Reproduce the work and simulate the writing from top papers
- Seek feedback from peers
- Actively participate in the NEXUS-S1 Google Group discussion
- Actively participate in the fortnight online NEXUS-S1 meetings



## DO NOT

- Do not be *passive*
- Not in “*Academic writing in English*”
- No ethical issues such as *plagiarism, double submission*
- Do not oversell your own work
- Do not wait for instructions, come up with your own ideas
- Do not miss the deadlines
- Do not do everything without communication with supervisors



[TULIP Academy](#)

[NEXUS](#)

[Starting NEXUS Training](#)

[Road to Success](#)

# Road to Success





# Enjoy the Journey

- [TULIP Academy](#)
- [NEXUS](#)
- [Starting NEXUS Training](#)
- [Road to Success](#)







# Questions?

[TULIP Academy](#)

[NEXUS](#)

[Starting NEXUS Training](#)

[Road to Success](#)



# Contact Information

Professor **GANG LI**  
School of Information Technology  
Deakin University  
Burwood, Victoria 3125, Australia



[GANGLI@DUCK.COM](mailto:GANGLI@DUCK.COM)



[OPEN RESOURCES FROM TULIP-LAB](#)



[TEAM FOR UNIVERSAL LEARNING AND INTELLIGENT PROCESSING, AUSTRALIA](#)

