

In this project, your group is required to:

- i. to conduct exploratory analysis on employment in Singapore using python only
- ii. prepare an interactive dashboard to help user to perform exploratory analysis themselves
- iii. present your findings on the your exploration.

You may download any relevant data from Department of Statistics, Singapore via [Singapore Department of Statistics \(DOS\) | SingStat Table Builder](#) , navigate to

- ▶ **Labour, Employment, Wages and Productivity**
Statistics on Labour Force; Employment; Productivity; Recruitment and Resignation Rate; Wages; Unit Labour Cost Index; Training; Job Vacancies; CPF; Labour Relations

Employment

- ▼ **Labour, Employment, Wages and Productivity**
 - ▶ **CPF Members and Employers**
 - ▶ **Employment**

Data are provided below:

Employment

Changes In Employment By Sector, (Compared To The Previous Period)

Employed Female Residents Aged 15 Years And Over By Industry And Age Group, (June)

Employed Female Residents Aged 15 Years And Over By Occupation And Age Group, (June)

Employed Male Residents Aged 15 Years And Over By Industry And Age Group, (June)

Employed Male Residents Aged 15 Years And Over By Occupation And Age Group, (June)

Employed Residents Aged 15 Years And Over By Industry And Age Group, (June)

Employed Residents Aged 15 Years And Over By Industry And Occupation, (June)

Employed Residents Aged 15 Years And Over By Occupation And Age Group, (June)

Employment (Persons) By Sector, (As At Year-End)

Employment Services (Year-To-Date)

Labour Market Statistics

Labour Market Statistics (End Of Period)

Number Of Employers By Sex, End June

Number Of Full-Time Employed Residents By Sex, End June

Number Of Part-Time Employed Residents By Sex, End June

Re-Entry Into Employment Rate

Proportion Of Resident Females Among Managers And Administrators

Here are some of the possible target audience and sample questions you may use for your analysis:

1. For overseas students studying in Singapore:
 - a. Is it wise to stay back in Singapore for career development?
2. For manpower related stakeholders in Singapore:
 - a. How employment patterns shift?
3. For investors coming to Singapore or entrepreneurs starting a new business
 - a. What type(s) of business will match well with the employment supply in Singapore?
4. For educators/parents/students
 - a. Which type of courses has promised a better career opportunity in Singapore?
5. For mid-career/senior worker
 - a. What are the considerations of a career-switch?

Feel free to create your own questions beyond those listed above, make sure that you have a clear presentation target audience.

You may also use other data sources from credible data base to perform comparison with Singapore situation.

As this is a group project, any use of generative AI assistance are strictly **not allowed**, you are strongly encouraged to tap on the human resources available in your group to solve all issues, including programming syntax, logics, flows, debugging and presentation scripts.

Involvement of parties other than the team members in producing any of the deliveries will also result in a 0 score.

All work must be done in the Python programming language. Graders should be able to run your code without additional installation and setup. **Graders may select groups for interviews to answer questions related to submitted works as part of the random check or to ascertain academic integrity.** All submitted works should be done originally by the group members only, which means no outsider(s) should be involved in the project work. Submitting works done by others or plagiarised works is an act of academic dishonesty. Academic dishonesty affects the University's reputation and devalues the degrees offered. The University will impose serious penalties on students who are found to have compromised academic integrity.

Any email enquiring about the project directed to the grader **MUST** be cc to all members of the group.

Deliverables:

1. Submission:

- All Jupiter notebook .ipynb files, and the data required to be loaded by the notebook file.
- All data cleaning and exploratory analysis output such as visualisations should be kept with short mark-down on the findings/insights in Jupyter notebook file.
- All python .py files for the interactive dashboard.

Good project outcomes are the result of effort and good teamwork. I hope to see all team members contribute equally.

2. Presentation in person (last workshop):

- Present the important points, insights, visualizations, and your contribution.
- Demonstrate the interactive dashboard.
- Maximum 10 minutes per group. Each team member needs to present for ~2 mins.
- You are advised to adhere strictly to the time limit, or a penalty will be imposed.

3. Presentation Grading (last workshop):

- As you are already a domain expert by then, you can exercise evaluations on analysis by others.
- You will be given an evaluation rubric to access presentations by other groups.

4. Peer Evaluation:

- You are required to submit a peer evaluation form online individually (the due date is the same as the Project's due date). Individual peer evaluation submission is compulsory for all team members. An online peer evaluation system will be opened nearer to the submission date. Your score may be adjusted based on the peer evaluation outcome.
- Please note that the evaluation will NOT be re-opened after the due date announced, failing to do the evaluation will result in a reduction in participation mark. Submission will be kept confidential.

Presentation:

23 Oct 2025, class time.

All MUST present, otherwise will get a 0 grade for presentation, any online presentation will be capped at 80% of the group score.

Submission Due Date:

23 Oct 2025, 10 p.m.

Penalty will be imposed for late submission.