Affordability of Master of Computer Science Programs for U.S. Students in 2025

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Executive Summary

This report investigates whether a U.S. student applying to the Master of Computer Science program at Monash University can afford the associated costs. The student's parents are willing to provide full financial support, with an annual budget of USD 43,593.9. By calculating and comparing tuition, rent and living cost expenses over 2025, we estimate the annual total cost at approximately USD 57,000. The results indicate that while the budget is sufficient, the choice may still impose noticeable financial pressure on the family.

Introduction

Pursuing a graduate degree abroad is a major life decision that often comes with substantial financial considerations. This report focuses on a student from the United States who plans to apply for the Master of Computer Science program at Monash University. The student's tuition and living costs will be fully supported by their parents. The family has set a annual budget of USD 43,593.9 in 2025. No scholarships, personal savings, or part-time work are assumed in this analysis. The key question is whether this budget allows the student to afford Monash without putting excessive financial pressure on the family. We analyze multiple cost components including tuition, accommodation and living cost expense. Data is sourced from a standardized international education cost dataset in USD. Monash University, located in Melbourne, is known for its strong computer science program but also relatively high costs. This report aims to assess affordability under the current assumptions and explore whether the choice is financially sustainable for the student's family.

Methodology

Data Source and Preparation

Analysis is based on the *Cost of International Education* dataset (Shamim, 2025), imported via

```
read_csv(here("data/International_Education_Costs.csv"))
```

It provides program duration, tuition, rent, living cost index, visa fees and insurance (all in 2023 USD). We filtered for Master of Computer Science programs, confirmed all key cost variables were numeric with no missing values, and resolved duplicate university names by averaging affordability ratios.

Cost Projection and Component Calculation

- **Tuition and rent:** Projected with a 4.75% forecast annual inflation rate (International Monetary Fund, 2024).
- **Other Living Cost:** Using New York as the baseline (cost index = 100), a value of $17,736 for a master's student (excluding housing and insurance; New York University (2024)) was applied to 2025 using each university's living cost index.
- **Formulas:**
  - Annual Tuition (2025): Tuition_USD (2023) / Duration_Years × 1.0475
  - Annual Rent (2025): Rent_USD (2023) × 12 × 1.0475
  - Other Living Cost (2025): $17,736 × (Living_Cost_Index / 100)
- **Visa and insurance fees:** Excluded as they were minor (<5%) and variable.

Income Projection, Budget and Affordability Ratio

The 2023 U.S. median household income of $80,160, retrieved from U.S. Census Bureau (Guzman & Kollar, 2024), was projected to 2025 at a 2.8% compound annual growth rate (U.S. Census Bureau, 2025). We assumed 50% of projected income could be allocated to education:

- Student Budget (2025): Projected Income × 0.5

- Affordability Ratio: Student Budget / Total Yearly Cost
  (Ratio > 1 indicates affordability for a median U.S. household.)

Analytical Environment

All analyses were performed in R using tidyverse (e.g. readr, ggplot2, knitr) (Wickham et al., 2019) and here (Müller, 2020) within a Quarto workflow. Git was used for version control, and the report was rendered via LaTeX.

- Figure 1 shows each university's affordability ratio.
- Table 1 summarizes the 30 most and least affordable Master of Computer Science programs.

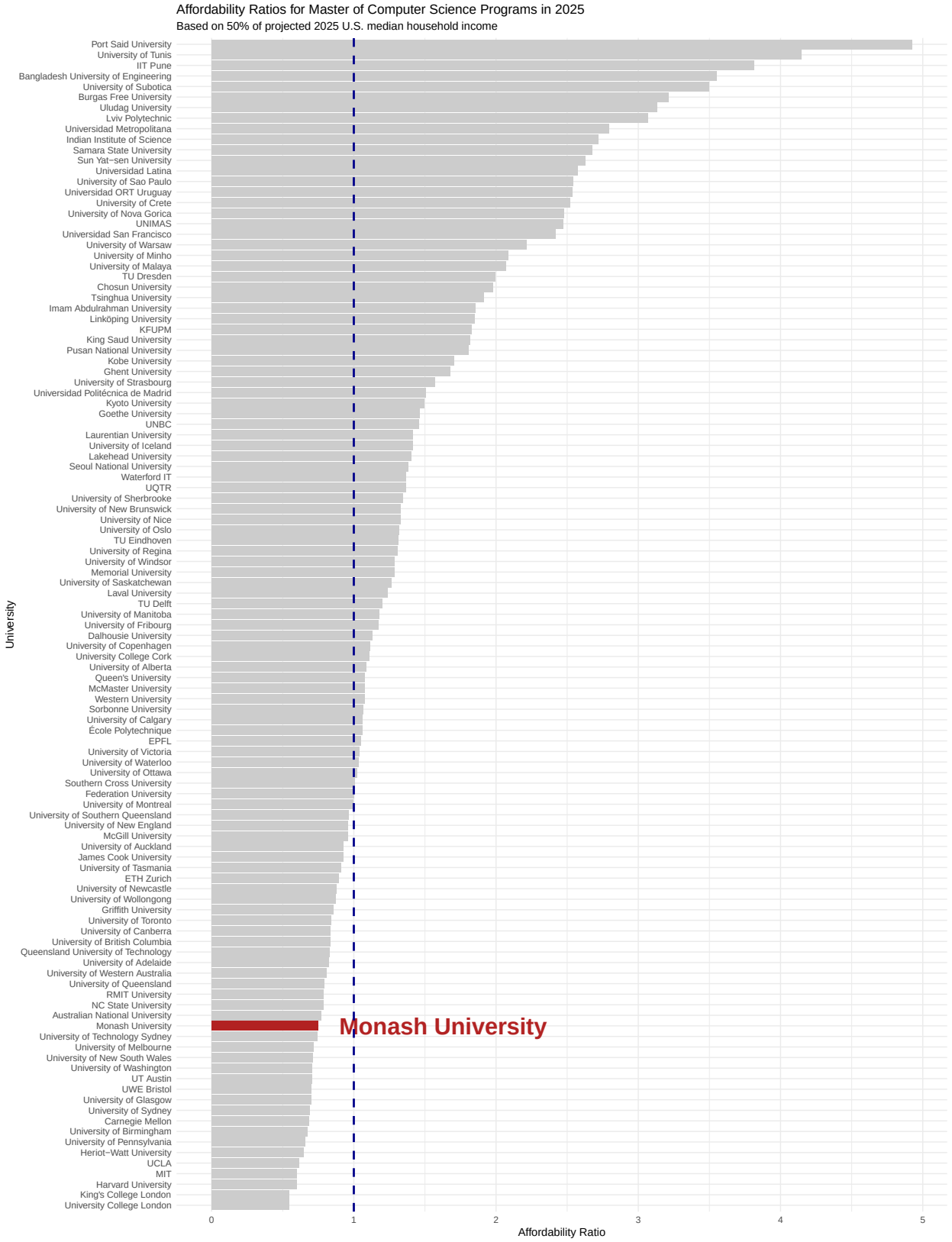

Figure 1: Affordability Ratios for Master of Computer Science Programs by University in 2025

Table 1: Top 30 Most and Least Affordable Master of Computer Science Programs (2025 Budget)

Category	University	AffordabilityRatio	Rank
Most Affordable	Port Said University	4.9253757	1
Most Affordable	University of Tunis	4.1443163	2
Most Affordable	IIT Pune	3.8154140	3
Most Affordable	Bangladesh University of Engineering	3.5525299	4
Most Affordable	University of Subotica	3.4942831	5
Most Affordable	Burgas Free University	3.2130568	6
Most Affordable	Uludag University	3.1318962	7
Most Affordable	Lviv Polytechnic	3.0654894	8
Most Affordable	Universidad Metropolitana	2.7917174	9
Most Affordable	Indian Institute of Science	2.7160887	10
Most Affordable	Samara State University	2.6768140	11
Most Affordable	Sun Yat-sen University	2.6274200	12
Most Affordable	Universidad Latina	2.5727869	13
Most Affordable	University of Sao Paulo	2.5404241	14
Most Affordable	Universidad ORT Uruguay	2.5379160	15
Most Affordable	University of Crete	2.5221221	16
Most Affordable	University of Nova Gorica	2.4769218	17
Most Affordable	UNIMAS	2.4731889	18
Most Affordable	Universidad San Francisco	2.4196880	19
Most Affordable	University of Warsaw	2.2136267	20
Most Affordable	University of Minho	2.0866818	21
Most Affordable	University of Malaya	2.0714131	22
Most Affordable	TU Dresden	1.9941176	23
Most Affordable	Chosun University	1.9799613	24
Most Affordable	Tsinghua University	1.9148033	25
Most Affordable	Imam Abdulrahman University	1.8533610	26
Most Affordable	Linköping University	1.8467420	27
Most Affordable	KFUPM	1.8276600	28
Most Affordable	King Saud University	1.8175308	29
Most Affordable	Pusan National University	1.8076891	30
Least Affordable	University of Wollongong	0.8718112	82
Least Affordable	Griffith University	0.8560785	83
Least Affordable	University of Toronto	0.8419581	84
Least Affordable	University of Canberra	0.8372575	85
Least Affordable	University of British Columbia	0.8331501	86
Least Affordable	Queensland University of Technology	0.8278685	87
Least Affordable	University of Adelaide	0.8243079	88
Least Affordable	University of Western Australia	0.8060313	89
Least Affordable	University of Queensland	0.7900676	90
Least Affordable	RMIT University	0.7876260	91
Least Affordable	NC State University	0.7852924	92
Least Affordable	Australian National University	0.7677047	93
Least Affordable	Monash University	0.7512469	94
Least Affordable	University of Technology Sydney	0.7445364	95
Least Affordable	University of Melbourne	0.7155528	96
Least Affordable	University of New South Wales	0.7131953	97
Least Affordable	University of Washington	0.7062961	98
Least Affordable	UT Austin	0.7039131	99
Least Affordable	UWE Bristol	0.7026966	100
Least Affordable	University of Glasgow	0.6995179	101

Table 1: Top 30 Most and Least Affordable Master of Computer Science Programs (2025 Budget)

Category	University	AffordabilityRatio	Rank
Least Affordable	University of Sydney	0.6884417	102
Least Affordable	Carnegie Mellon	0.6838748	103
Least Affordable	University of Birmingham	0.6746301	104
Least Affordable	University of Pennsylvania	0.6584594	105
Least Affordable	Heriot-Watt University	0.6466667	106
Least Affordable	UCLA	0.6169212	107
Least Affordable	MIT	0.5970874	108
Least Affordable	Harvard University	0.5958882	109
Least Affordable	King's College London	0.5454385	110
Least Affordable	University College London	0.5428724	111

Result

The following figure compares the estimated affordability ratio of applying a Master of Computer Science across selected universities.

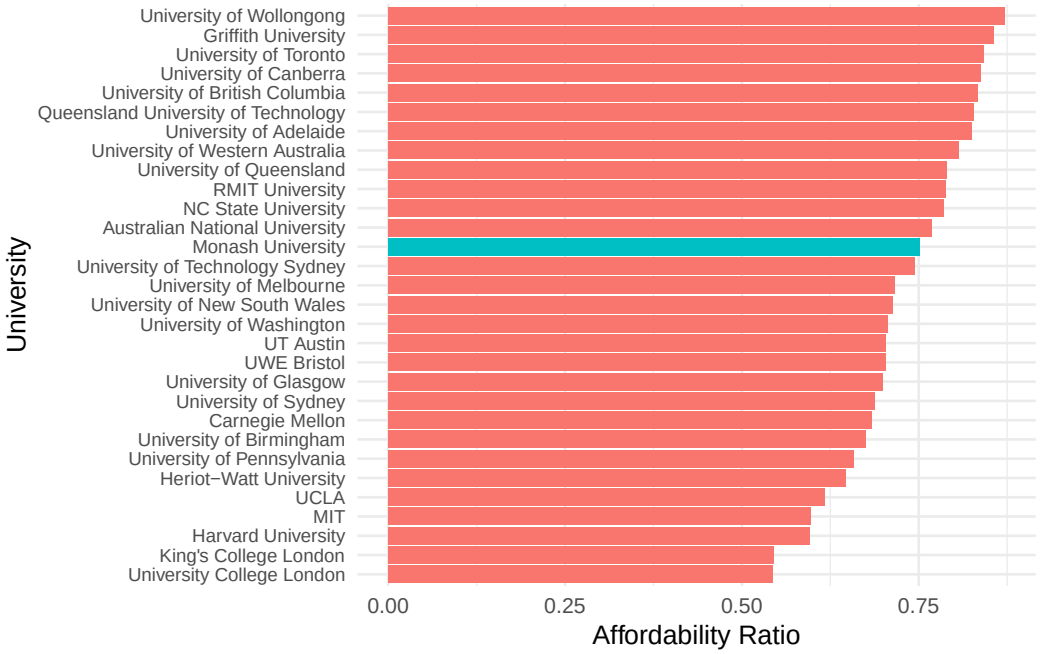

Figure 2: Bottom 30 Estimated Affordability Ratio of Master of Computer Science

Figure 2 shows the bottom 30 universities with the lowest affordability ratio for applying a master degree of Computer Science in 2025. Monash University ranks in the **bottom range**, with a ratio is **0.751** for one academic year. Although its tuition fee is moderate, relatively high rent and living expenses in Melbourne contribute to the overall cost. These results highlight the role of rent and living expenses form the full financial burden of international education.

Conclusion

This report evaluated the total cost of a USA student with a budget of **USD 42,355.90** plan to apply a master degree of Computer Science at Monash University in 2025. By analyzing tuition fees, rent and living expenses

cost for year 2025 (adjust by inflation rate) across global universities which have master program of computer science.

Our analysis shows that Monash University's tuition fee of a year is **USD 22,416.5** which is relatively moderate when compared to U.S. and U.K. universities. Based on the cost of living index in Melbourne (72.8) and the Cost of Attendance which released by New York University (NYU), the estimated monthly living cost is **USD 1,076** and the annual living cost will be estimated as **USD 12,912**. This is also relatively moderate compared to U.S. and U.K. universities, though it still acts as an major part of total expense. However, monthly rent of USD 1,780.75 significantly increases the total cost and decreases the affordability ratio which reaching an estimated **USD 21,369** for single living per year. The total cost is **USD 56,697.5** which has a gap **USD 14,341.6** between budget, and the affordability raio is **0.751**, which is **well above**.

Therefore, under current assumptions, applying this degree at Monash would **likely impose a financial burden** unless supplementary funding options such as scholarships, shared housing, or part-time employment are secured.

We recommend that international students conduct a detailed cost breakdown when planning to study abroad, considering not only tuition fee but also living and setup costs. University like Monash remain attractive due to their academic reputation and moderate tuition fee, but total affordability depends on each student's financial context.

References

Guzman, G., & Kollar, M. (2024). *Income in the united states: 2023* (P60-282). U.S. Census Bureau. https://www.census.gov/library/publications/2024/demo/p60-282.html

International Monetary Fund. (2024). *World economic outlook, april 2024: Steady but slow: Resilience amid divergence*. International Monetary Fund. https://doi.org/10.5089/9798400255892.081

Müller, K. (2020). *Here: A simpler way to find your files*. https://here.r-lib.org/

New York University. (2024). *Cost of attendance, 2024–2025*. https://www.nyu.edu/students/student-information-and-resources/bills-payments-and-refunds/tuition-and-fees.html

Shamim, A. (2025). *Cost of international education*. Kaggle Dataset. https://www.kaggle.com/datasets/adilshamim8/cost-of-international-education

U.S. Census Bureau. (2025). *Median household income in the united states* [*MEHOINUSA646N*]. FRED, Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org/series/MEHOINUSA646N

Wickham, H., Averick, M., Bryan, J., Chang, W., McGowan, L. D., François, R., Grolemund, G., Hayes, A., Henry, L., Hester, J., Kuhn, M., Pedersen, T. L., Miller, E., Bache, S. M., Müller, K., Ooms, J., Robinson, D., Seidel, D. P., Spinu, V., … Yutani, H. (2019). Welcome to the tidyverse. *Journal of Open Source Software*, *4*(43), 1686. https://doi.org/10.21105/joss.01686