Lebanon's Tech Graduate Surge in Recent Years

Supportful

www.supportful.world

About Supportful

Supportful is a software engineering consulting company on a mission to reduce the brain drain in Lebanon. We enable global tech startups to scale their teams with remote engineers from Lebanon.

With deep expertise across frontend, backend, mobile, QA, AI, data, and DevOps, Supportful ensures each client receives talent precisely matched to their technical and cultural needs.

As a mission-driven company, Supportful is committed to preserving Lebanon's human capital. Our goal is to allow software engineers to work from their hometowns and contribute to the growth of their local economy.

We believe in a future where Lebanese talent excels globally while making a positive impact locally.

To learn more about Supportful's work and mission, visit **www.supportful.world**

Table of Contents

Introduction

This report provides a comprehensive analysis of Software Engineering (SE) graduates in Lebanon, covering the years 2018 to 2024 and capturing both the period before and during the country's severe economic crisis. For the purposes of this study, Software Engineering encompasses graduates from both Computer Science (CS) and Computer Engineering (CE) programs.

The report examines overall graduate trends, the increase in enrollment seen across years, and the influence of the economic collapse on academic pathways.

As a company deeply engaged in Lebanon's tech ecosystem, we sought to highlight how the software engineering community has evolved in recent years. While this job could (and should) have been done by public institutions, we stepped up to do it as we believe Lebanon's tech talent scene is massively growing and deserves to earn a spot on the global outsourcing map.

The findings reveal a clear and accelerating trend: the total **number of graduates increased by 67%** between 2019 and 2023, with Computer Science gaining momentum as students pursued quicker and more affordable routes to employment.

Female representation has remained stable **at around 28%** of graduates – above averages in several Western countries – confirming Lebanese women's strong position in tech. Through the following charts and analyses, we aim to provide a clearer understanding of how the recent challenging years are shaping the future of Lebanon's software engineering talent.

Participating Universities

Supportful reached out to all universities in Lebanon that have Computer Science (CS) and Computer Engineering (CE) programs. They include the Lebanese University, the only public university in Lebanon, along with other private universities.

Universities that accepted to participate in this research and provided graduate data are the following (listed in alphabetical order):

- **American University for Science & Technology (AUST)**
- **American University of Beirut (AUB)**
- **Antonine University (UA)**
- **Arab Open University (AOU)**
- **Beirut Arab University (BAU)**
- **Holy Spirit University of Kaslik (USEK)**
- **Lebanese American University (LAU)**
- **Lebanese Canadian University (LCU)**
- **Lebanese International University (LIU)**
- **Lebanese University (LU)**
- **Notre Dame University (NDU)**
- **Rafic Hariri University (RHU)**
- **Université La Sagesse (ULS)**
- **University of Balamand (UOB)**

The Lebanese University (LU) offers tuition-free education. The CS and CE programs are taught mostly in English, with some universities adopting French. The LU and several private universities maintain multiple campuses across the country.

The information presented in this report was collected between September 2024 and June 2025, depending on institutional availability. Consequently, not all universities were able to cover the full 2024–2018 period, and some did not share gender-specific percentages.
These data limitations are noted in each relevant chart throughout the report for transparency purposes.

Historical Overview of Lebanon's Higher Education System

Lebanon has long been recognized for its strong education system which dates back to centuries. It is home to the oldest universities in the Middle East: the American University of Beirut (AUB) founded in 1866, and the Saint Joseph University (USJ) founded in 1875. It is also home to the oldest French-speaking school in the Middle East – College Saint Joseph in Antoura – founded in 1834.

While higher education remained restricted to the elite, the establishment of the Lebanese University in 1951 marked a pivotal moment, providing accessible public higher education to a broader population.

With an education system blending Arabic, French, and English, Lebanon became a regional magnet for students across the MENA region, drawn by the country's academic freedom and globally respected degrees.

An aerial view of the American University of Beirut campus. (Photo credit: Clustermarket)

Impact of Lebanon's Economic Crisis on Graduate Major Selection

The economic collapse that began in late 2019 coupled with the COVID-19 pandemic drastically shifted career mindsets among Lebanese undergraduates.

Faced with a collapsing currency and lockdown measures that hurt traditional businesses, many students started viewing software engineering beyond an academic path. It offered a practical gateway to stable, dollar-denominated income, and remote-friendly work.

The Lebanese economic crisis in numbers[1]

The Lebanese pound lost **98%** of its value against the US dollar

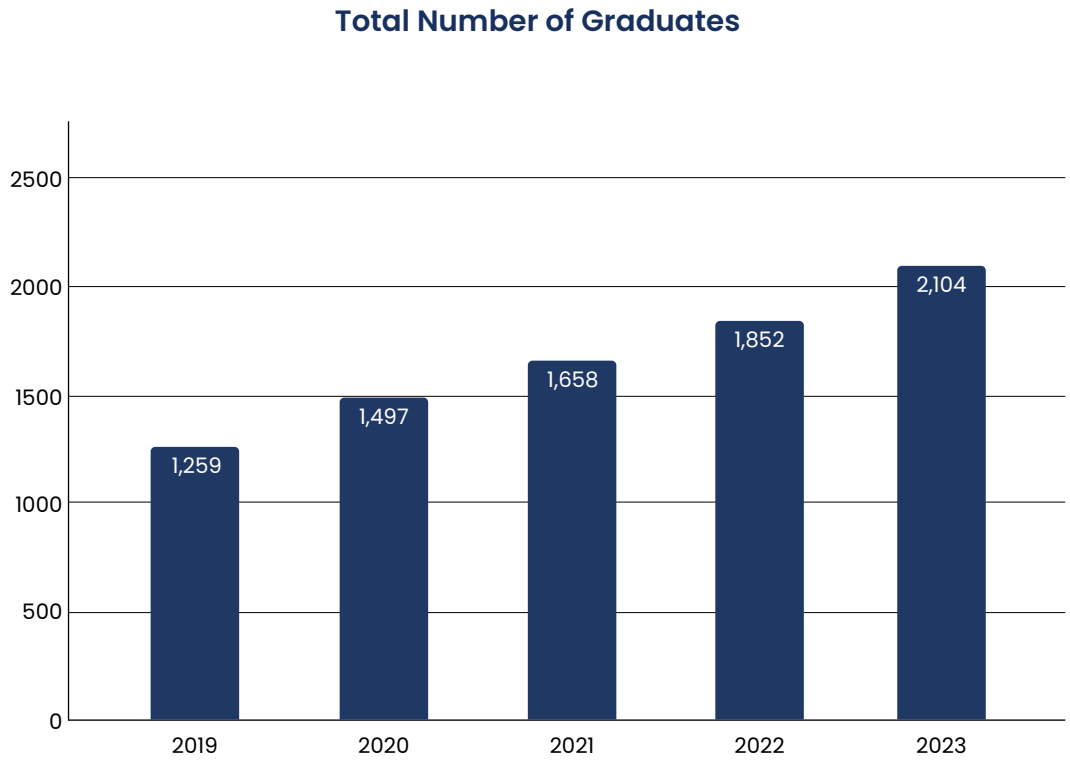
The World Bank labeled Lebanon's crisis as one of the worst in the world in the past **150 years**

182% is the average annual inflation rate across the years 2021-2023

With a global surge in demand for software engineers during the pandemic, young Lebanese started heading to SE majors to leverage a growing market and secure their future.

1. Sources: The World Bank and the Lebanese Central Administration for Statistics.

Evolution of SE Graduates in Recent Years



The total number of SE graduates increased consistently from 2019 to 2023, rising from 1,259 in 2019 to 2,104 in 2023, **a growth of 67%** over the four-year period. This represents a substantial overall increase across participating universities, reflecting the rising interest of Lebanese students in software engineering.

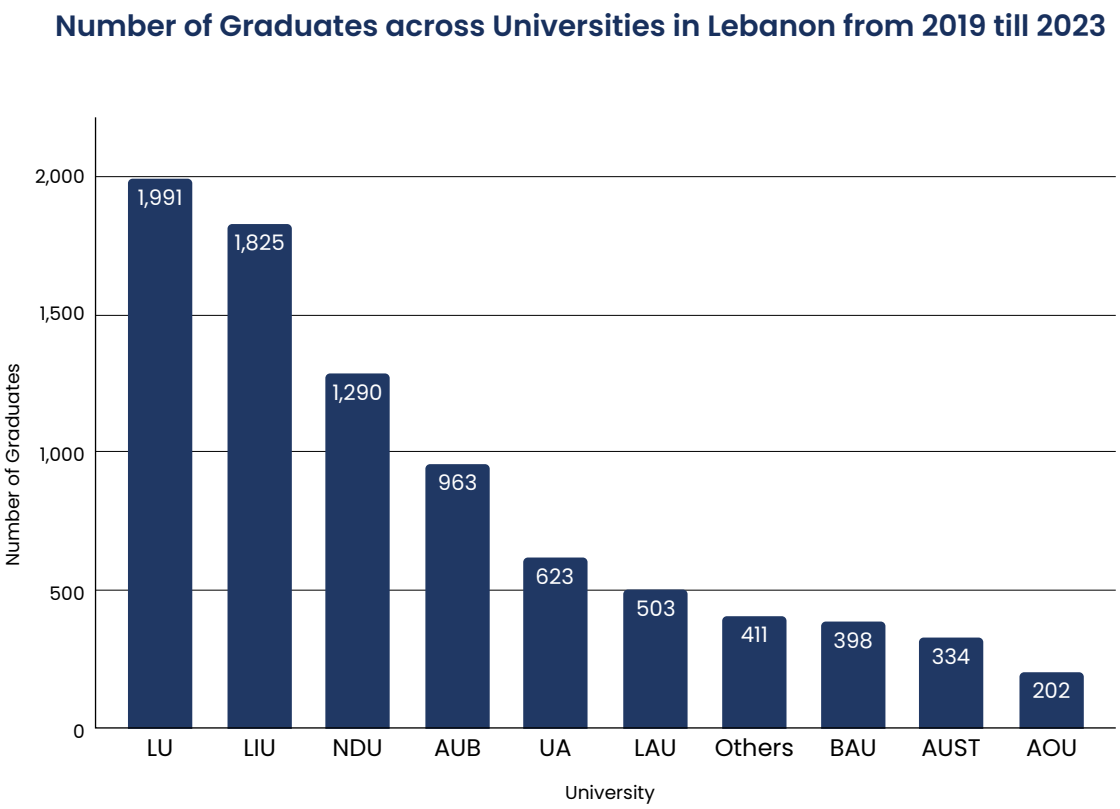
Year-over-Year Growth in SE Graduates

Year	Year-over-Year Increase in Total Graduates
2020	18.9%
2021	10.8%
2022	11.7%
2023	13.6%

The year-over-year growth rates of graduates reveal important shifts across the 2019–2023 period. The sharpest increase occurred in **2020 (+18.9%)**, marking the highest annual growth rate during the study window.

After that peak, growth moderated, ranging between **10.8% and 13.6%** in subsequent years. Although this stabilization suggests a leveling trend, maintaining consistent double-digit growth indicates sustained student interest and a continued expansion of the tech talent pool.

SE Graduates Across Universities



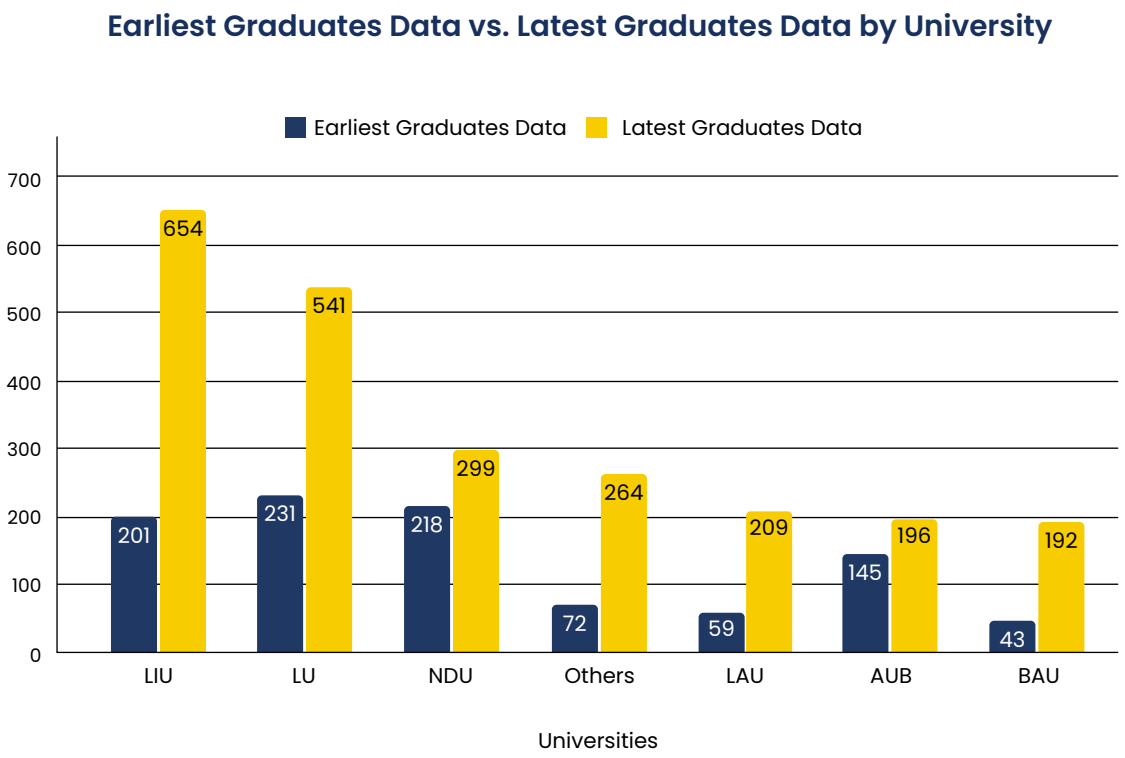
This chart displays the total number of Software Engineering graduates reported by Lebanese universities from 2019 to 2023.

The figures reflect only the data provided by universities and may not account for graduates from institutions that did not submit full data for the period in study.

The **LU** tops the chart with **1,991 graduates** followed closely by **LIU** with **1,825 graduates** and then **NDU** in third position with **1,290 graduates**.

Note: Other universities comprise all universities that have less than 200 graduates for the whole period.

SE Graduates Growth by University



Because the available data does not cover a uniform time span for all universities, the comparison is based on the first and last reported years for each institution (2018-2024 for LIU, LU, and BAU; 2018-2023 for NDU and AUB; 2019-2024 for LAU).

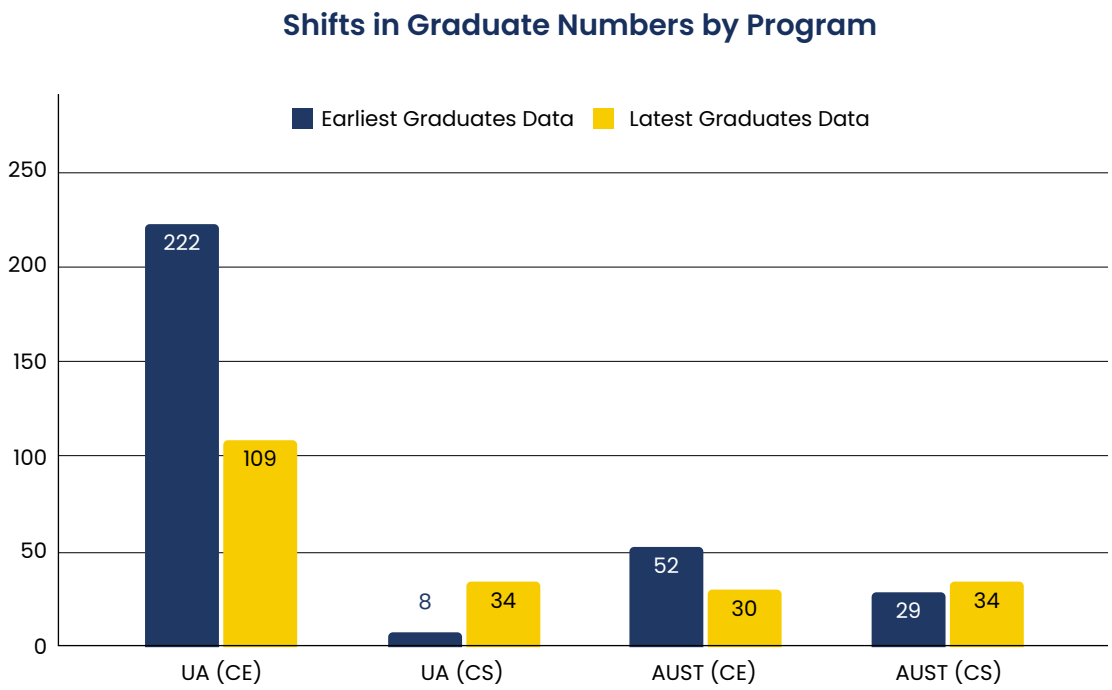
The results reveal substantial growth in several universities, most notably **BAU**, **LAU**, and **LIU**, which recorded increases of **347%**, **254%**, and **225%**, respectively.

While these sharp rises reflect the general shift in student interest toward SE disciplines, a closer look at the underlying reasons sheds light on two possible drivers behind this triple-digit growth.

First, university tuition fees were adjusted during the past years to account for the LBP's falling value. Many of these fees were charged partly in USD and partly in LBP, which made them significantly more affordable compared to other private universities and to their own pre-crisis fees.

Second, some universities increased their financial aid budgets in recent years to help alleviate the burden of tuition fees for students, especially those already enrolled.

Decrease in Computer Engineering Graduates



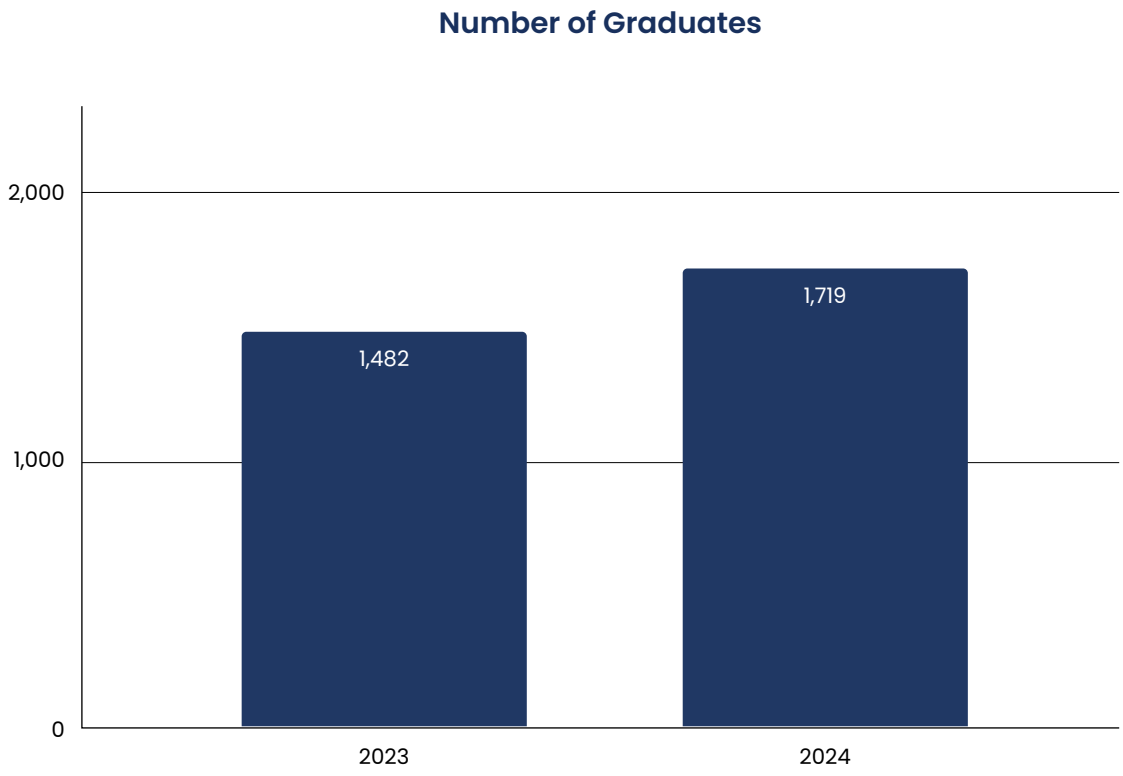
We conducted separate case studies for UA and AUST as they did not follow the general trend.

Both universities experienced significant decreases in the number of CE graduates: UA's CE output **dropped by nearly half** between 2018 and 2024 (a 2x decrease), while AUST saw a **42% decline** in CE graduates between 2019 and 2023.

These declines may be tied to economic factors, particularly the longer duration of study and higher financial cost associated with engineering programs, which became increasingly difficult for students to sustain during the crisis.

At the same time, both universities saw an increase in graduates from the Computer Science program, which is generally shorter and less costly. This keeps them in line with the overall increase trend seen across universities, with UA recording a 325% increase in CS graduates over the 2023-2024 period and AUST recording a 17% increase over the 2019-2022 period.

Most Recent SE Data: 2024



Although most universities did not provide data for 2024, an analysis of the institutions that submitted figures for both 2023 and 2024 reveals a continued increase in the total number of graduates, **rising by 16%** from 1,482 to 1,719.

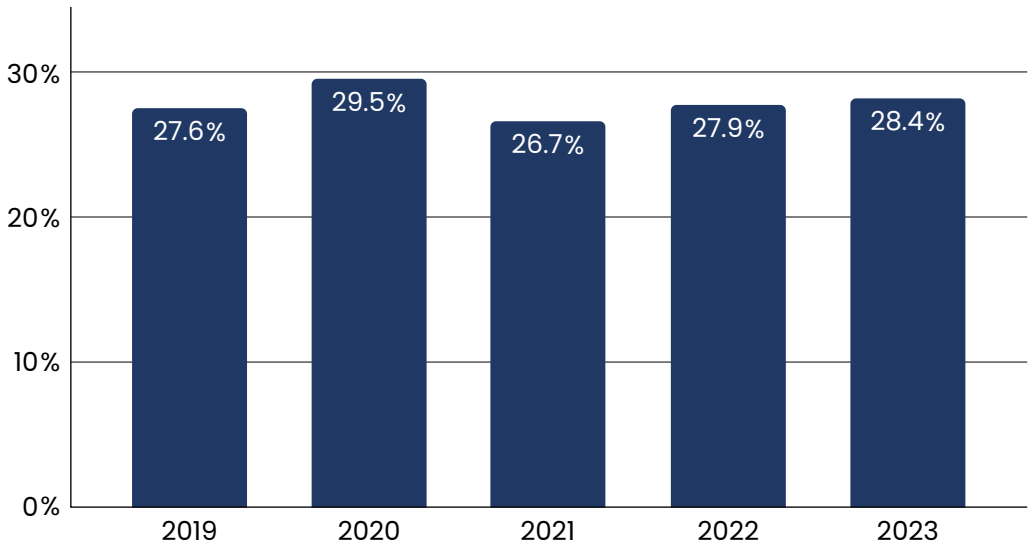
This figure is in line with double-digit YoY growth rates observed in earlier years.

Women in Software Engineering

The presence of women in software engineering has remained high in Lebanon over the years. Female participation has remained stable at 27-30% of graduates as we will see in the following sections, a level higher than both the US average standing at 22% (per the National Science Foundation) and the French average at 17% (per OFCE at Sciences Po).

This percentage may be linked to the perception of software engineering in Lebanese society as a highly skilled yet flexible profession. Research indicates that women often value workplace flexibility, particularly because many are primary caregivers[2]. The growing prevalence of remote work in the software sector has therefore made this field especially attractive to women in Lebanon.

Percentage of Female Graduates Over the Years



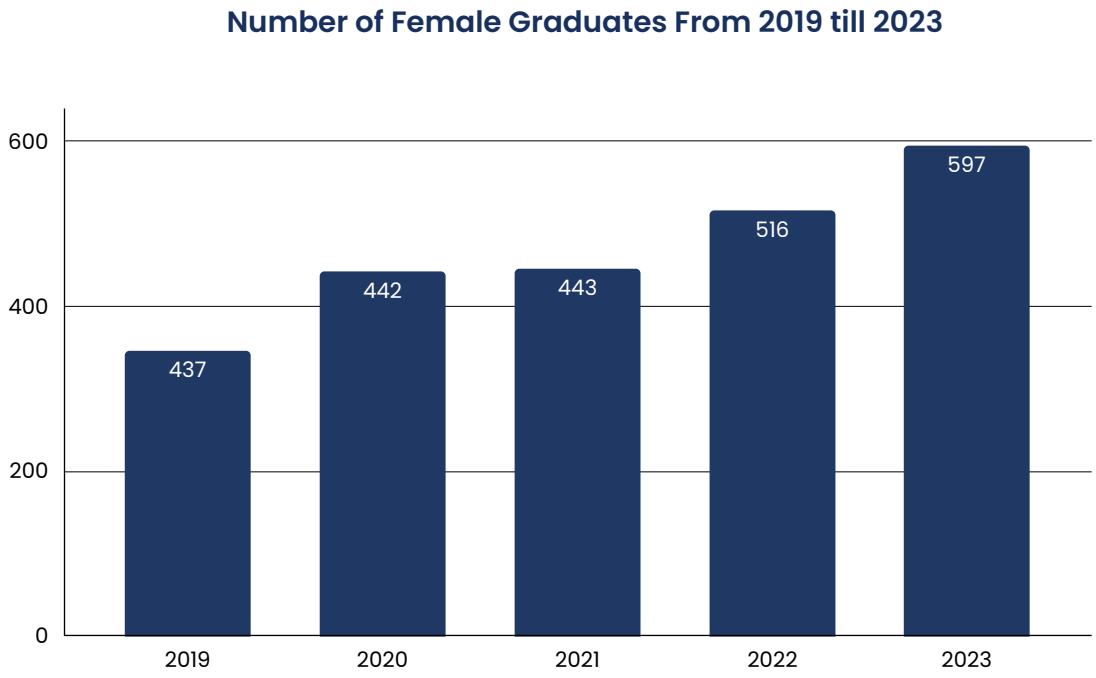
2. UN Women Report, June 30, 2025.

The percentage of female graduates in Software Engineering has remained relatively stable between 2019 and 2023, fluctuating within a narrow band of **27% to 30%.** The highest percentage was observed in 2020 at 29.5% , followed by a slight dip in 2021 before recovering in the following years.

By 2023, women represented 28.4% of total graduates, indicating that while absolute numbers of female graduates have grown, their proportion relative to men has not shifted dramatically. This stability suggests that increases in female graduates have largely kept pace with overall growth in the field.

Note: Similar results were observed in Supportful's **2024 Lebanese Tech Scene Report,** further validating the consistency of these trends across both academic and workforce data.

Growth in Female SE Graduates



The number of women software engineers has grown from 347 in 2019 to 597 in 2025, **an increase of 72%** over the four-year period. In comparison, the number of male graduates grew by %65 during that same period.

This growth likely reflects the combined impact of the economic crisis and the COVID-19 pandemic. Software engineering emerged as a secure and remote-friendly career path, providing a flexibility women seek in professional roles.

Year-over-Year Growth in Female SE Graduates

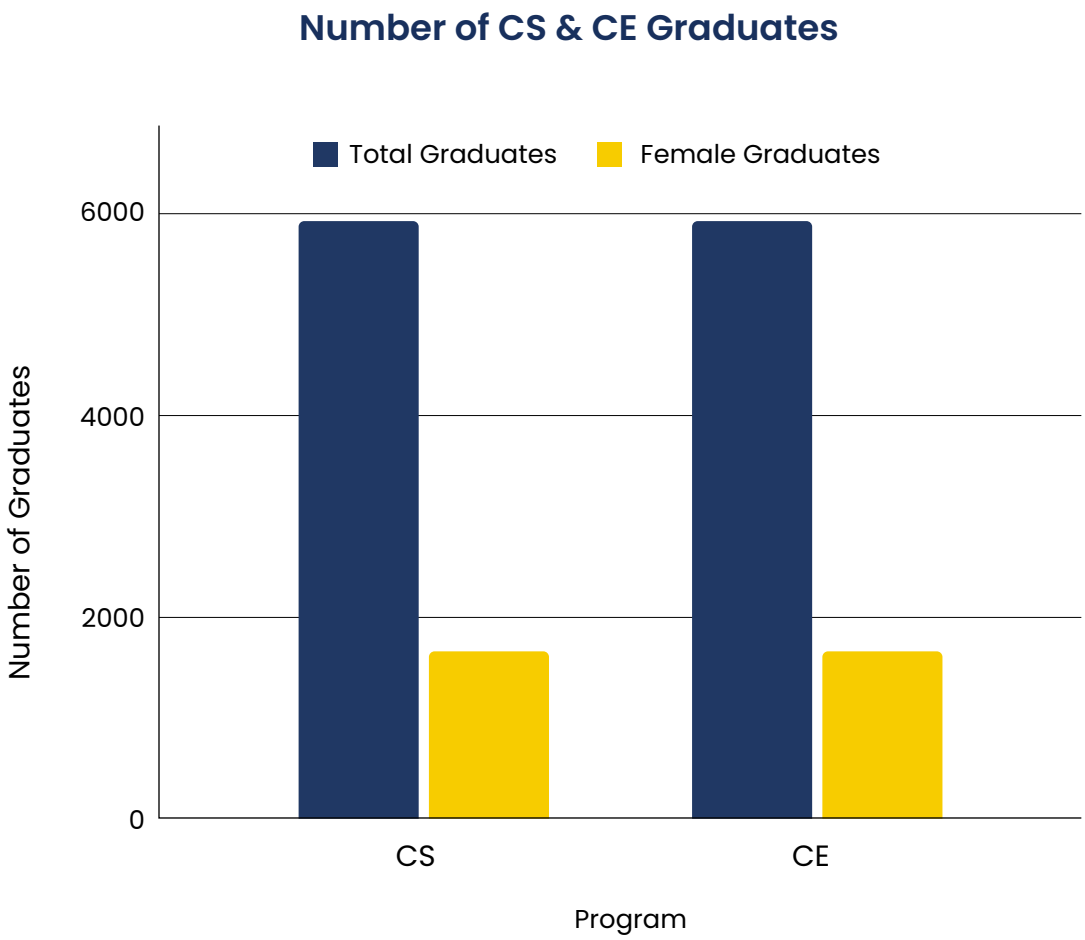
Year	YoY Change in Female SE Graduates
2020	27.4%
2021	0.2%
2022	16.5%
2023	15.7%

The Year-over-Year (YoY) analysis of female graduates highlights important fluctuations in growth patterns between 2019 and 2023.

The largest increase occurred in 2020 with a **27.4% rise**. Growth nearly stalled in 2021, with a marginal increase of only **0.2%**, likely due to the disruptions caused by the COVID-19 pandemic, which led to delays in academic graduations.

However, momentum picked up again in 2022 (**+16.5%**) and remained strong in 2023 (**+15.7%**), signalling renewed and sustained growth in female participation once universities and students adapted to post-pandemic conditions.

Gender Preferences in CS and CE



The comparison between CS and CE graduates highlights both the scale of each program and female representation within them.

Across the study period, CS produced 5,916 graduates, **including 1,672 women (28%)**, while CE produced 4,919 graduates, **including 1,462 women (30%)**. Despite growth in absolute numbers, the female participation rate in both programs has remained relatively stable over time, showing little change in the overall gender balance.

Key Takeaways

This report set out to explore trends in Software Engineering education in Lebanon, and we believe it has provided valuable insights into how graduates, universities, and gender representation have evolved over recent years.

The key findings are:

- Lebanon's strong educational foundation, combined with its rising pool of software graduates, positions the country as a competitive hub for **outsourcing and remote software development**, providing high-quality talent to global markets.

- Software Engineering graduates in Lebanon grew by an impressive **67% rate** during the 2019–2023 period, showing an increased interest in the field.

- The financial crisis pushed students toward **Computer Science**, seen as quicker and more affordable, while **Computer Engineering** declined in some universities due to cost and longer duration.

- Lebanese universities saw staggering growth in the number of their SE graduates, with most of them witnessing **triple-digit growth** rates and only a few of them **double-digit growth** rates.

- Women made up a steady **27–29% of graduates**, above both US and French averages.

With a resilient education system, continuous graduate growth, and comparatively strong female participation, Lebanon is well-positioned to expand its global tech footprint. The country's tech talent base is growing every year to accommodate for increased outsourcing opportunities.

www.supportful.world