



Pink Panthers

Pink Tank '22



Challenge

To tackle long standing issues concerning the overall academic & professional success of female students in STEM.



Mission

To propose innovative solutions that will empower women to thrive in STEM.



Vision

Empowered Women Empower Women

Data sets

01

High-School

High-schools across USA

02

College

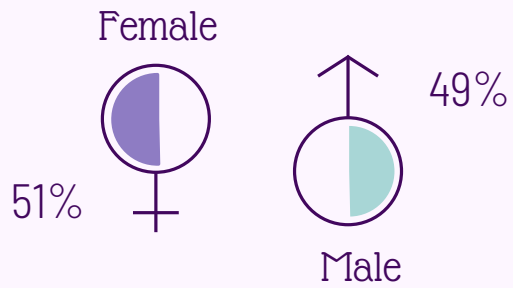
Universities in North, Central & Southeast

03

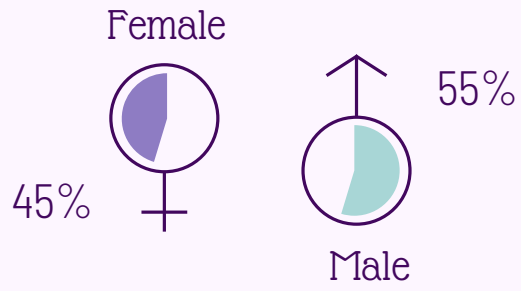
FIU

Miami, FL

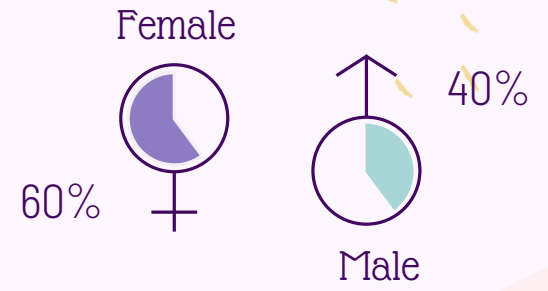
GENDER GAP



Highschool



College



FIU

The background features a light lavender color with several large, overlapping pastel shapes in shades of peach, teal, and purple. A thin, hand-drawn gold line curves across the center of the page.

01
HIGH-SCHOOL

KPI Overview

Key Findings [^]

01

The overall grade point average (GPA) & graduation rate has increased over the years

02

1.6 million elementary, high school and university students shows that girls out perform boys at all ages.(CNN)



51%

Women Representation



< 5.92%

Women Graduation Rate

Problems ^{*}

Lack of Exposure to STEM Courses

Difficulty Level / Preconceived Notions, Math Anxiety From Women Teachers #1

Parental Encouragement & Support

Lack of Experienced Faculty/Mentors

Discouragement at a Young Age

Stigma Around STEM Fields

Refer to the document

* AAUW (All the sources are cited in the references slide)

^ Insights From High-School Data

The image features a light purple background with several large, overlapping, semi-transparent shapes in shades of peach, teal, and dark purple. A central, slightly irregular purple circle contains the text "EXPOSURE!!" in a dark purple, serif font. A thin, golden-yellow brushstroke is visible behind the text, adding a decorative touch.

EXPOSURE!!

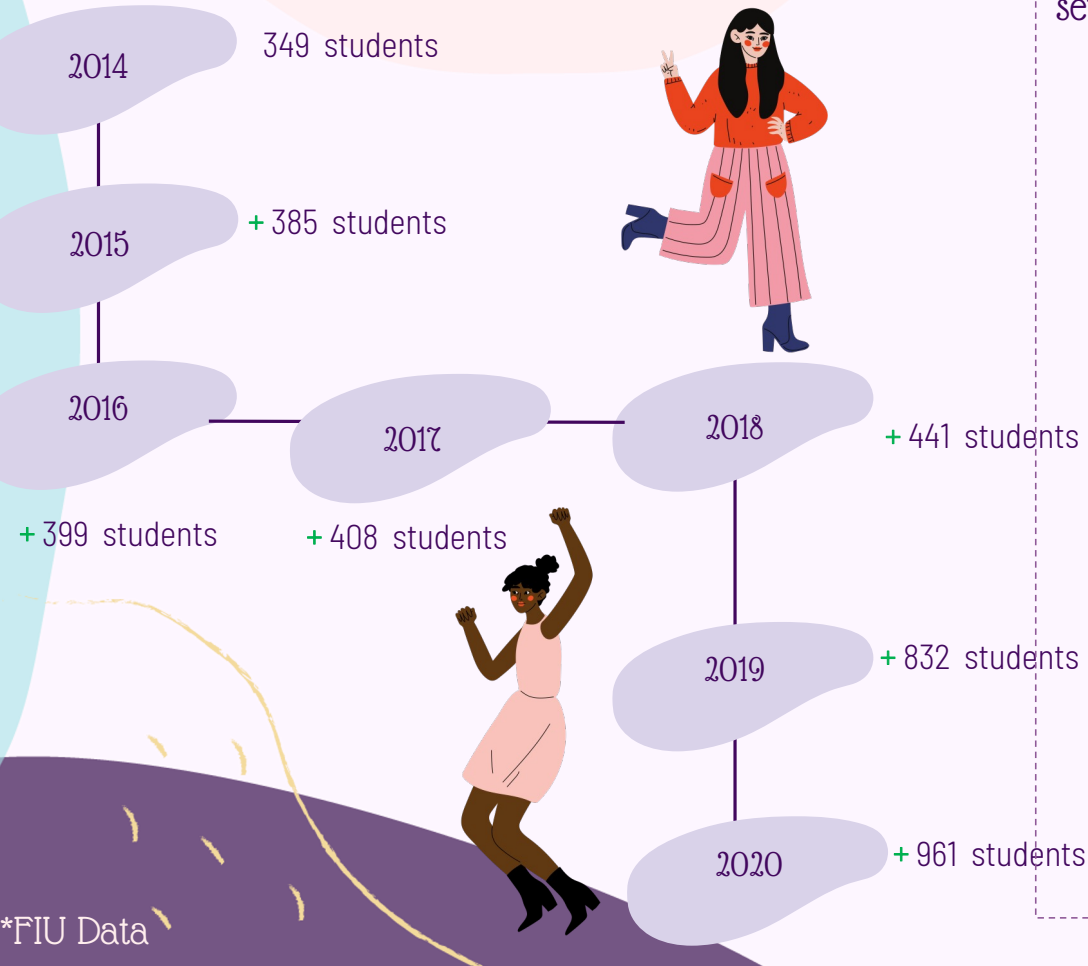


02
College

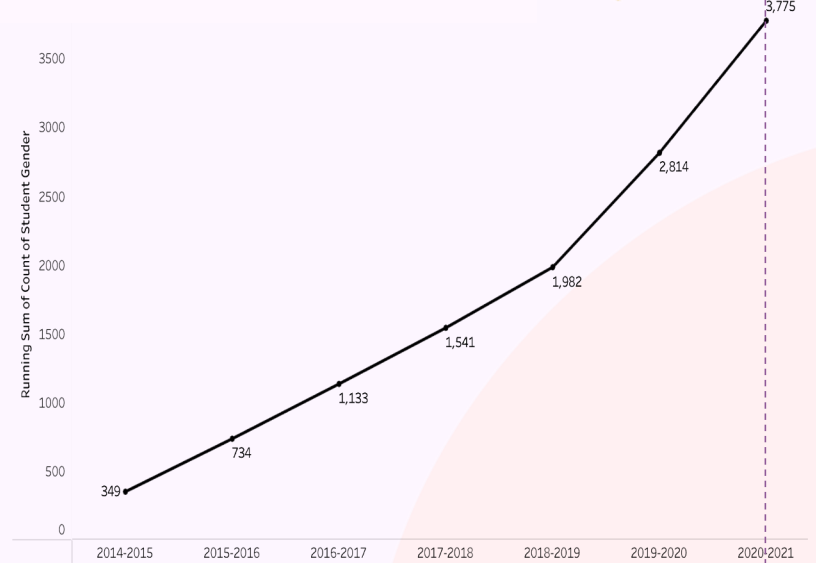
Mid-Field & FIU

Trend of Women in Tech & Engineering

* Total no. of female students pursuing Tech & Engineering degrees **increased by 90.75%** in these seven years.



Technology & Engineering



*FIU Data

Key Findings[^]

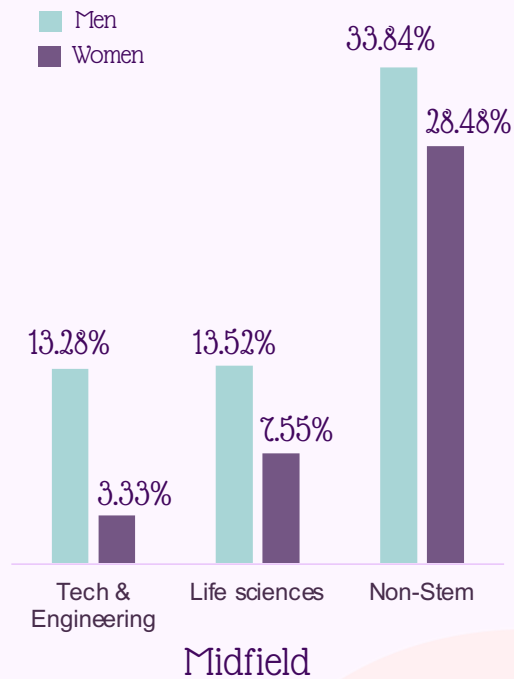
01 : NON-STEM

72/100 women choose Non-Stem courses.

02 : STEM

69.4% of degrees that women take are Life-Sciences and, only 30.6% are Tech & Engineering courses.

KPI Overview



Problems*

Lack of Self-Confidence & Performance Anxiety

Fewer Female Role Models

Women tend to pursue more Empathetic occupations

Lack of Alumni Network & Student Organizations

* AAUW (All the sources are cited in the references slide)

[^] Insights From Midfield Data

What is happening & Why?

Education: *"The Leaky Pipeline"*

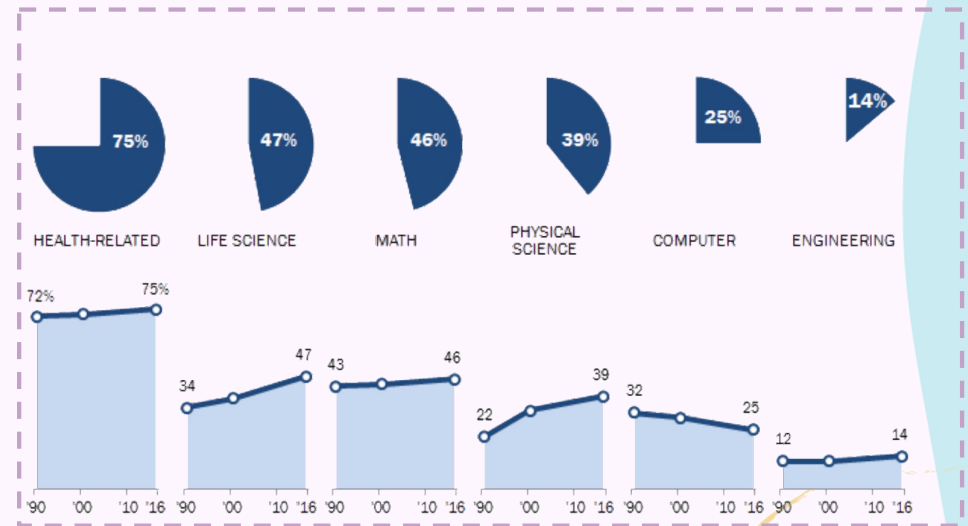
- Nationally, women make up 57.3% of bachelor's degree recipients
- Women represent only 38% of STEM bachelor's degree recipients.
- 49.2% of women who originally intend to major in science and engineering as a first-year switch to a non-STEM major, compared to 32.5% of men.
- Women hold about 26% of computing occupations but represent only 13% of higher level positions or CIOs & CEOs.
- Women hold 76% of the health care jobs but represent only 40.8% of physicians and surgeons. #2

- #4 < Conceptual Difficulties
- < Inadequate Preparation
- < Poor Instructors
- < Language Barriers

Refer to the document (All the sources are cited in the references slide)


* PEW Research & Yale Scientific

The Share of Women in Life & Physical Science Has Gone Up But It Has Gone Down For Computer Jobs Since 1990



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ENCOURAGEMENT!!



03

Occupation

Key Findings[^]

- 01 Women make up only 27% of workforce in STEM fields.
- 02 Out of every 100 women only 26 are working in Technology or Engineering related jobs.
- 03 Annual salaries of women are nearly \$15,000 lower per year than that of men (STEM Fields)

KPI Overview



Problems^{*}

Lack of Professional Development & Training Opportunities

Male Dominated Work Culture

Fewer Female Role Models

Concerns about Work-Life Balance

Strenuous & Unpredictable Work Schedule

Mental Breakdowns

* AAUW (All the sources are cited in the references slide)

[^] Insights From US Census

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GLASS CEILING!!

Why STEM?



Future Of STEM

- 01 The national science foundation estimates that 80% of the jobs available during the next decade will require math and science skills
- 02 STEM jobs are projected to grow 8% by 2030. That is twice the rate of Non-STEM jobs.
- 03 Jobs such as Software Developers and Security Analysts are projected to see double-digital growth.

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04

Our Solutions



1

Grassroots-level

Institutional-level

2



3 Phases



3

Business
Organizational-
level

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EXPOSURE!!



1

Parents



01

Eliminate Gender Stereotypes

Eradicating cliches & their associated behaviors should be a priority.

02

Encouragement & Influence

76% of STEM Girls Think That Their Parents Encouragement Pushed Them To Think About Their Career Goals

03

Think Beyond the "Pink Aisle"

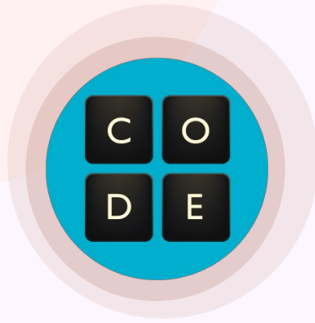
Expose Girls To Toys Like **Goldie Blox** And **Inventor Girl**, That Are Designed To Develop Early Interest In Engineering And Confidence In Problem Solving

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ENCOURAGEMENT!!

Students &
Teachers

2



01

Build Strong STEM Foundation

K - Middle Schools Should Partner With Free & Non- Profit Organizations For Kids Like **Chemicool**, **Science Kids** & **Code.org** To Educate and Expose Little Girls To STEM Courses

02

Simulation + Problem Solving Exercises In Class

High Schools + Colleges Should Use Hands On In Class Activities To Help Students Step Out of their Comfort Zone & Gain Spatial Skills

03

Competitions & Scholarships

Schools & Colleges Should Conduct STEM Based Competitions To Prepare Girls For The Real-World Challenges. Institutions Should Also Award Special Scholarships To Girls Pursuing STEM Majors.

Students &
Teachers

2



04

Student Organizations & Alumni Network

Encourage Women To Join Student Organizations Like AIS (Association of Information Systems), Alpha Omega Epsilon, Phi Sigma Rho Which Are Focused On STEM

05

Supportive Teachers & Mentors

Studies Show That Having A Supportive Teacher/Mentor Can Greatly Influence A Student's Career Choice & Motivate Them.

06

Special Career Fairs + Conference

Colleges Should Collaborate with Companies And Offer Entry Level Programs/ Internships To Help Females Set Their Foot In The Door. Encourage Females To Participate In Conferences Like Grace Hopper Celebration

The background features a light lavender gradient. Overlaid on this are several abstract shapes: a large, semi-transparent peach circle on the left; a central, semi-transparent purple circle; a teal semi-circle at the bottom left; a peach semi-circle at the bottom right; and a teal shape on the far right edge. A thin, hand-drawn yellow line with a dashed center passes through the purple circle and the text.

GLASS CEILING!!



3 Business Organizations



01

Work-life Balance

Women Are Always Struggling to Find Work + Personal Life Balance. Organizations Should Provide Child Care & Adult Care Facilities On Office Premises + Online To Help Single Care Givers

02

Reassess the Resources

Organizations Should Reassess The (EAP) Employee Assistant Programs & Collaborate With Learning Platforms Like LinkedIn Learning , MotherCoders To Help Their Employees Stay Up-To-Date With New Technologies

03

Conscious Inclusions

Offer Incentives & Promotions Based On Work Performance a & Meritocracy To Encourage Females To Thrive In STEM Careers


The Data Duo



ANALYTICS
MARKETING
WORK OUT
READ
PAINT
TRAVEL
DATA

Kinnari

MSIS-Business Analytics



DATA
ARCHITECT
SKETCH
TRAVEL
MUSIC
INTERIOR DESIGNER
ANALYTICS

Aishwarya

MSIS-Business Analytics

The Study Gram



dataexpedition 9+

11 Posts 755 Followers 249 Following

Science, Technology & Engineering
Behind every woman is a circle of women! 💕
We are here to share our struggles, get & give advice and celebrate each other's wins as STEM students 💕

Edit Profile Ad tools Insights

+

New

12:50

data, ml, & ai enth...
plotsam

Hi, i'm great! It's so nice to meet you and I would love to connect with you as well! I'm starting my undergrad in data science next fall so i'm excited to go through this tech journey with you :)

Yasssss girl 🥳💕💕 I'm so happy for you 🥳

Will definitely stay in touch 🥳

thank you haha 🥳🥳

12:50

Mehmet Ali Binek...
mali.bnkts

Hello

I'm interesting in software development

I ve couple questions if you re available

Hey 🥳 yeah sure, how can I help ?

Im software developer student at turkey

Im in the first class

And i just wanna know how this software things goin on in america

abbieintech You got this! 🥳💕 I'm pursuing a career in technology, but, I also have a different background. At the beginning I was afraid but now it doesn't stop me because I realized that the tech world is what really brings me joy. Happy to connect with you! 🥳

48w 📌 Pinned 1 like Reply

Resources

- **NewTimes:** <https://www.newstimes.com/local/article/More-women-than-men-in-life-sciences-but-less-in-12777665.php>
- **National Center of Biotechnology Information:** <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4943602/>
- **Yale Scientific:** <https://www.yalescientific.org/2020/11/by-the-numbers-women-in-stem-what-do-the-statistics-reveal-about-ongoing-gender-disparities/>
- **CIO Magazine:** <https://www.cio.com/article/201905/women-in-tech-statistics-the-hard-truths-of-an-uphill-battle.html>
- **AAUW Org:** <https://www.aauw.org/resources/research/the-stem-gap/>
- **US News:** <https://www.usnews.com/education/k12/articles/why-choose-a-stem-private-school>
- **PEW Research Center:** <https://www.pewresearch.org/social-trends/2018/01/09/women-and-men-in-stem-often-at-odds-over-workplace-equity/>
- **US Bureau Of Labor Statistics:** <https://www.bls.gov/>
- **US Census Bureau:** <https://www.census.gov/data.html>
- Boone, S. Al-Haddad, and E. Campbell, "Forecasting universities' graduation rates using multiple linear regression," in IIE Annual Conference. Proceedings. **Institute of Industrial and Systems Engineers (IIE)**, 2017, pp. 902-907.
- Chen, "Stem attrition: College students' paths into and out of stem fields. statistical analysis report.2014-001." **National Center for Education Statistics**, 2013.
- Zahedi, L., Lunn, S. J., Pouyanfar, S., Ross, M. S., & Ohland, M. W. (2020, June). Leveraging machine-learning techniques to analyze computing persistence in undergraduate programs. In 2020 **ASEE Virtual Annual Conference Content Access**.
- L. Zahedi, H. Ebrahiminejad, M. S. Ross, M. W. Ohland, and S. J. Lunn, "Multi-institution study of student demographics and stickiness of computing majors in the usa," **Collaborative Network for Engineering and Computing Diversity (CoNECD)**, 2020
- **Midfield Data Set**
- **FIU Data Set**



A Ship In a Port is Safe,
but that's not *what its built for.*

SAIL Out To Sea And Try New Things

- Grace Hopper