

Data Science for Design (DESI11100)

Week 11 – 30st November 2023

Final Presentation by

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VR Insights: Unmasking Workspace Gender Bias



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As Carmen Reinhart, Senior Vice President and Chief Economist of the World Bank Group said, “Women cannot achieve equality in the workplace if they are on an unequal footing at home.”



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Background and Challenge

The background of gender inequality in the workplace is deeply rooted in traditional notions of roles. This concept of "Domestic Determinism" suggests that gender dynamics directly influence career opportunities. Due to "Gender Stereotyping," women often encounter a "Glass Ceiling" in their professional development, limiting their rise to senior positions. Furthermore, "Work-Life Imbalance" exacerbates the challenges faced by women in the workplace.

**Domestic
Determinism**

**Gender
Stereotyping**

**Glass
Ceiling**

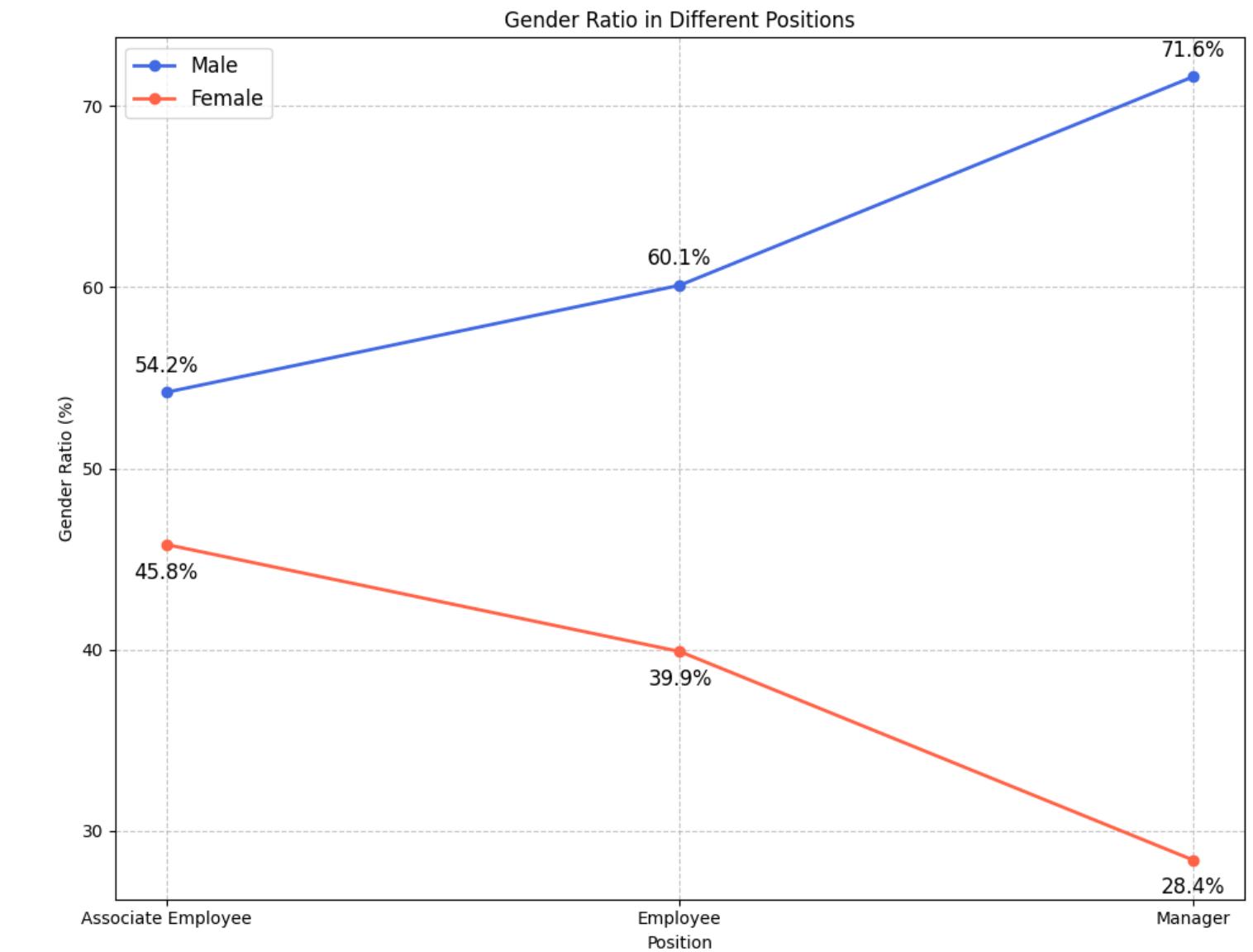
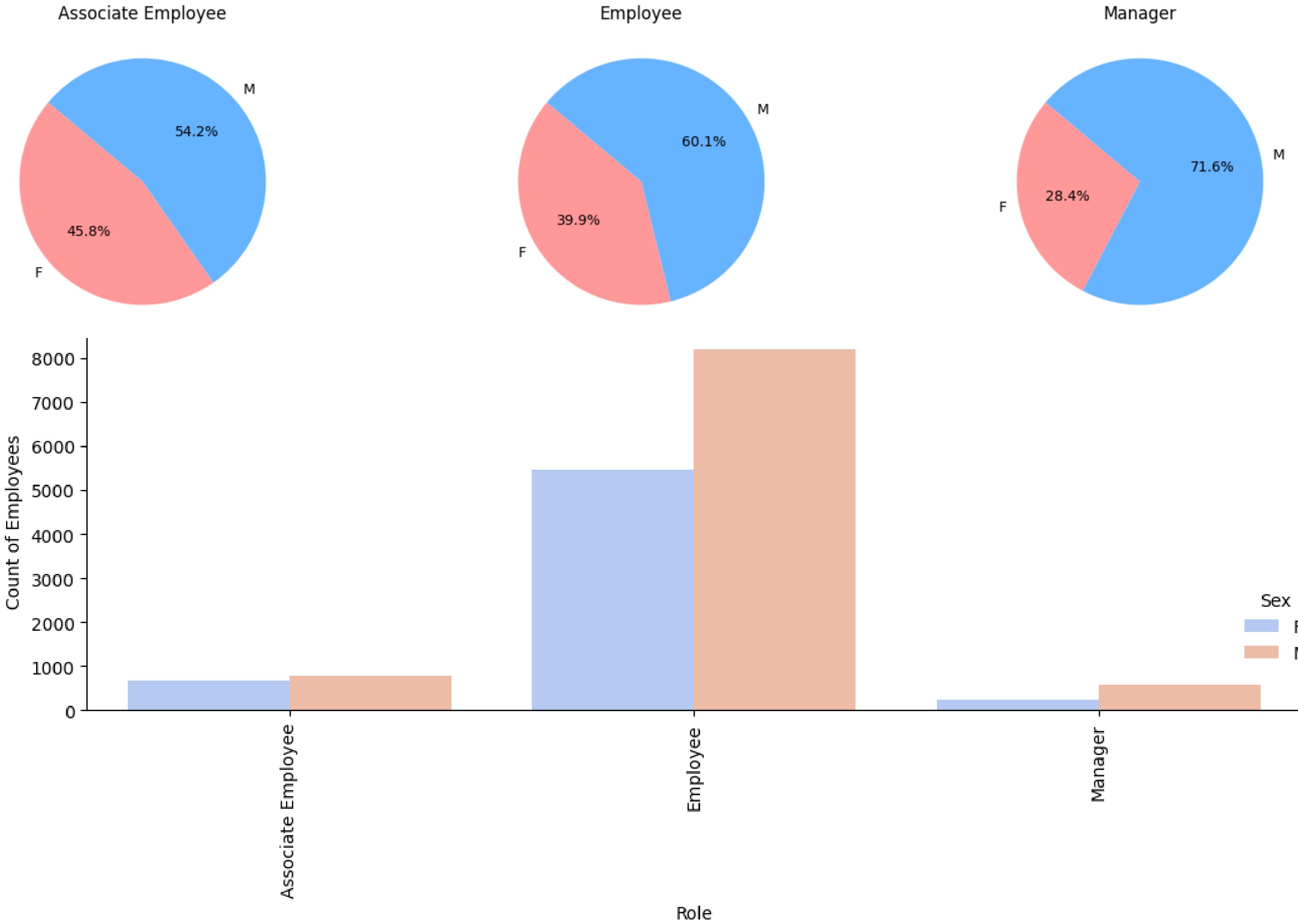
**Work-Life
Imbalance**



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Data Visualization and Analysis



In the Associate Employee Role, the gender distribution is more balanced, with women making up 45.8% and men 54.2%. However, at the Manager level, there's a significant skew, with men at 71.6% and women just 28.4%.

To address this imbalance, companies should prioritize gender equality for legal compliance, ethical fairness, and social justice. Gender equality enhances a company's reputation, attracts diverse talent, and expands market reach. Diverse teams encourage innovation and creativity, and reduce conflict and legal risks. Gender equality is not just a social responsibility, but a strategic advantage for long-term success.

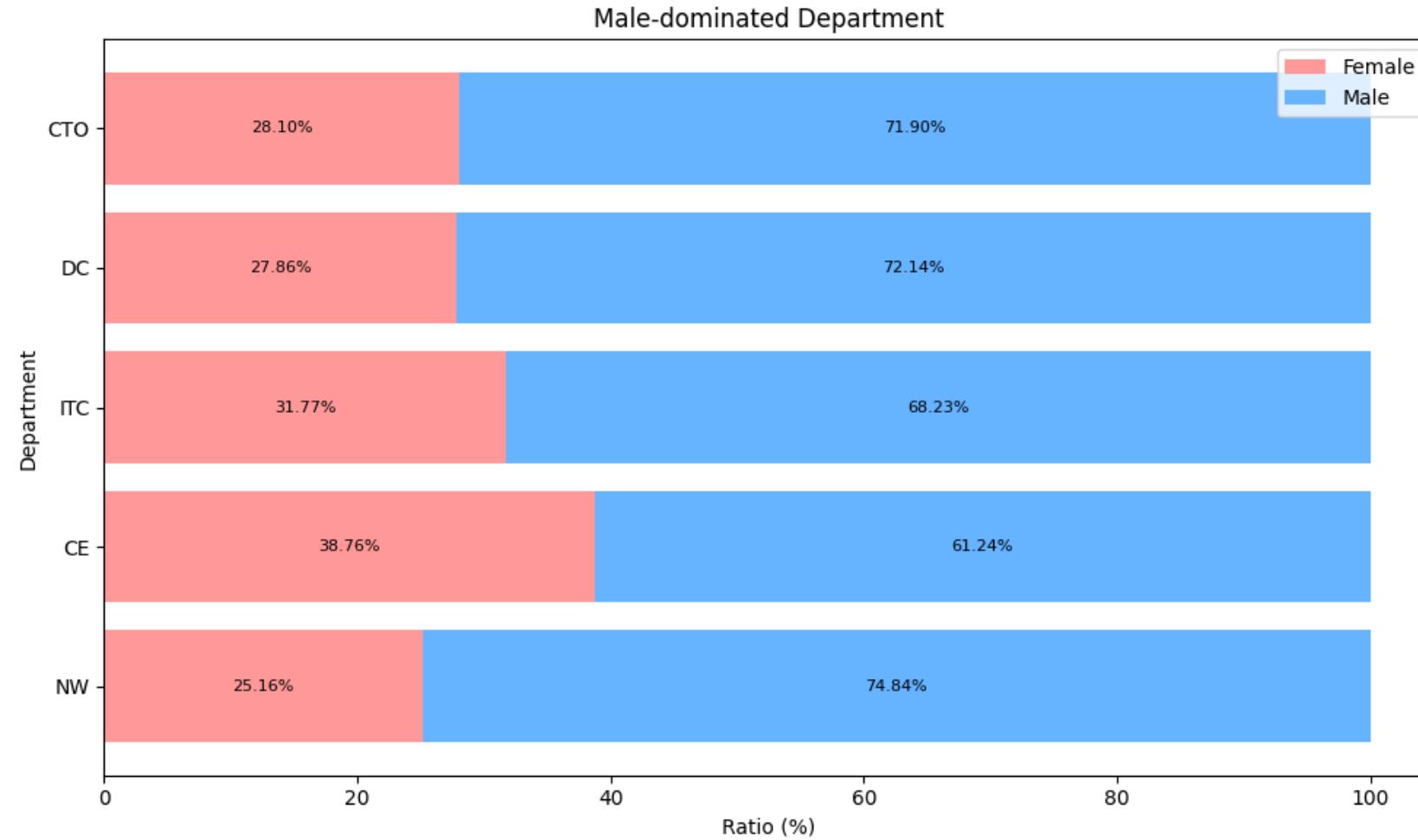


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Discovery

Departments with many males



NW: Network

CE: Chief Engineer

ITC: Information Technology Center/Communication

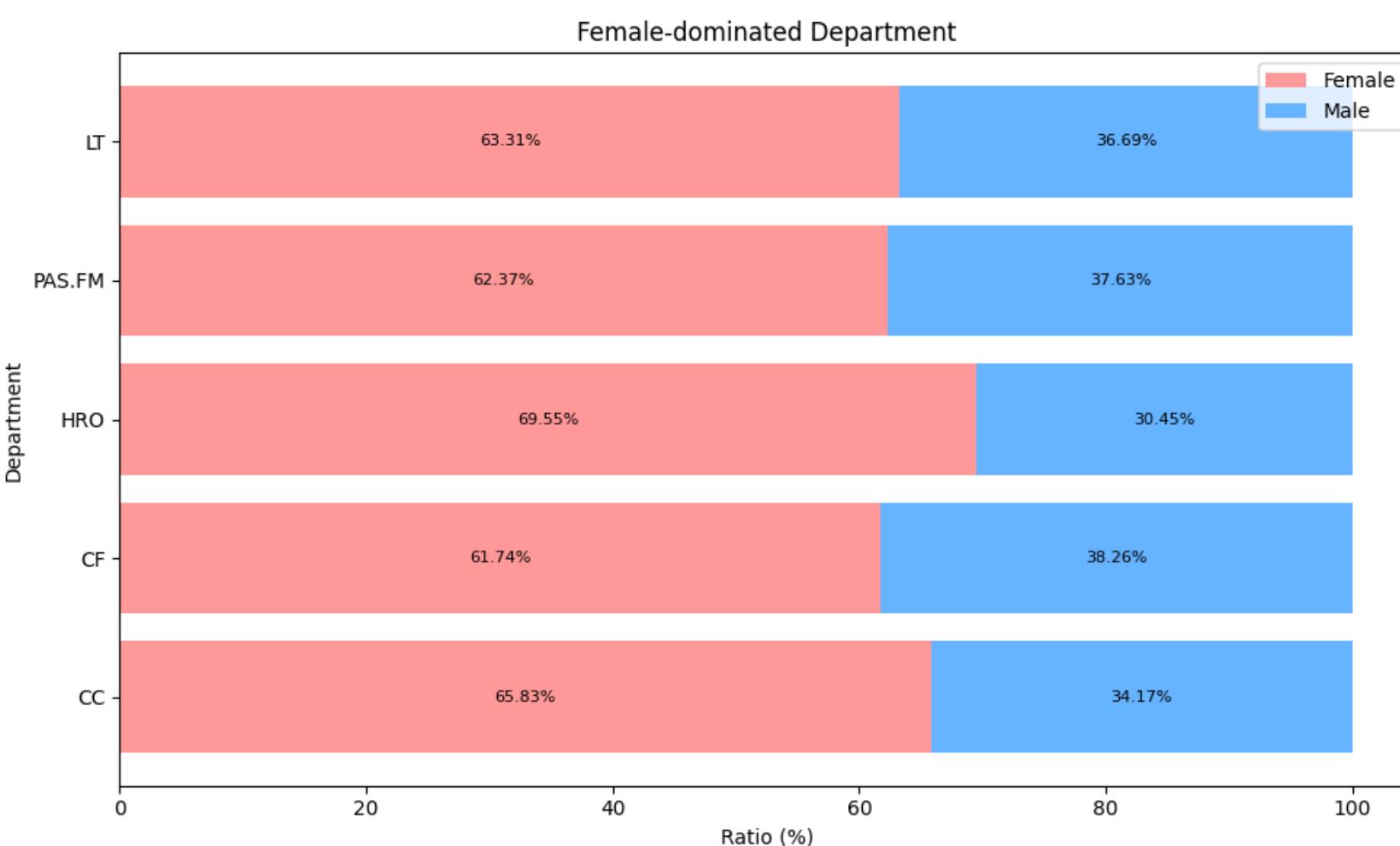
DC: Data Coordinator

CTO: Chief Technology Officer

WHY?

- Gender Stereotyping
- Male-Dominated Environment
- Career Barriers

Departments with many females



CC: Compliance Coordinator

CF: Corporate Finance

HRO: Human Resources Office

PAS.FM: Personnel/Administrative Services - Financial Management

LT: Leadership Team

WHY?

- Communication Skills
- Relationship Management
- Educational Opportunity Equalization



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Problems/ Concept and Our Audiences

It's clear that...

females consistently occupy a disadvantaged position in the job market, with the imbalance between males and females becoming more severe as the level of positions increases.

Concept Reasons

- Companies need to prioritize gender equality among employees for legal and ethical reasons.
- Gender equality can enhance a company's reputation and attract diverse talent.
- A diverse team helps foster innovation and reduces the risk of conflicts.

Audience



Chief Diversity Officer (CDO)

Responsible for the company's diversity and inclusion strategy, including gender equality.



Human Resources Manager (HR)

Responsible for recruitment, promotion and employee welfare policies and ensuring they adhere to gender equality principles.



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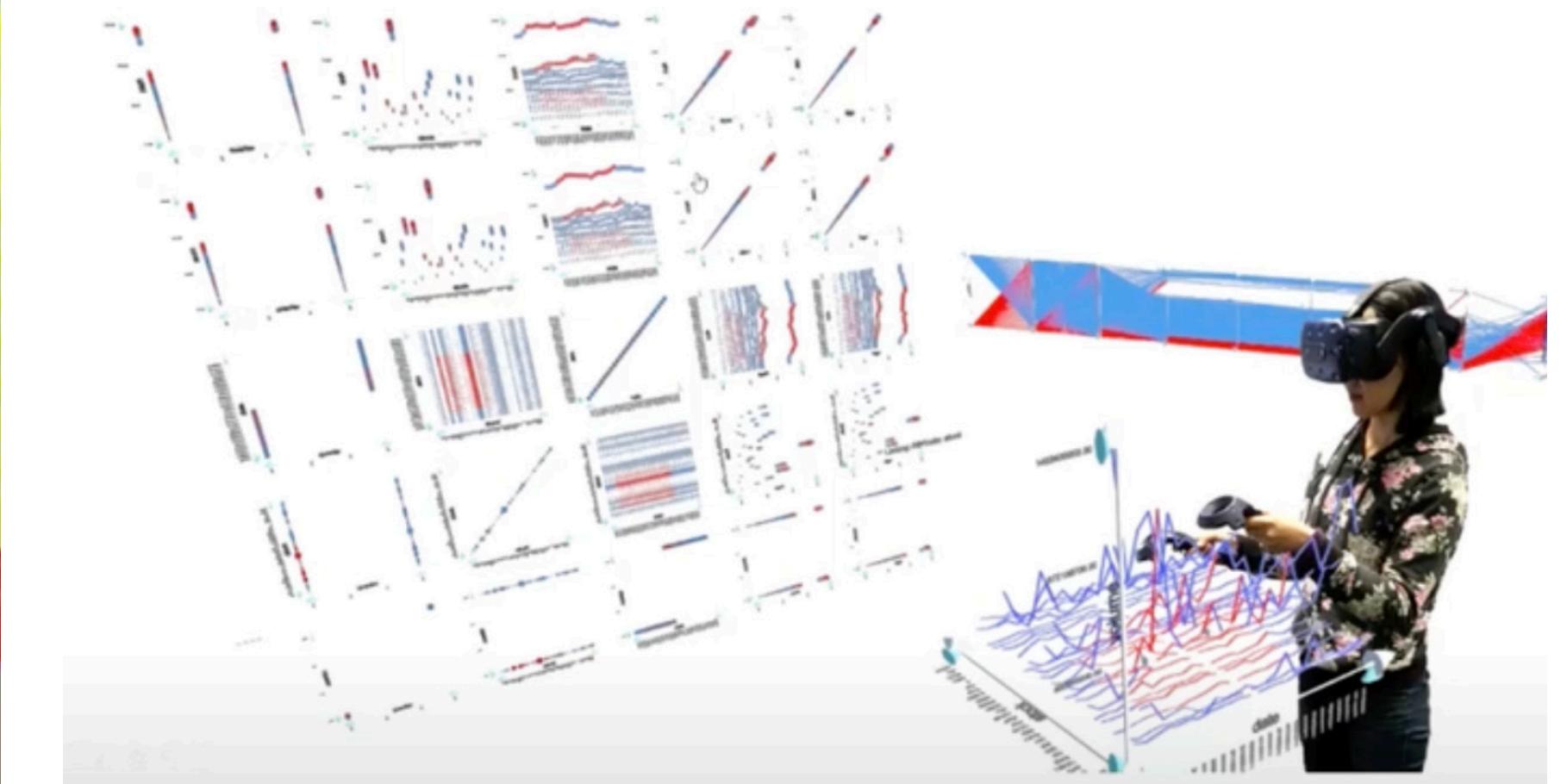
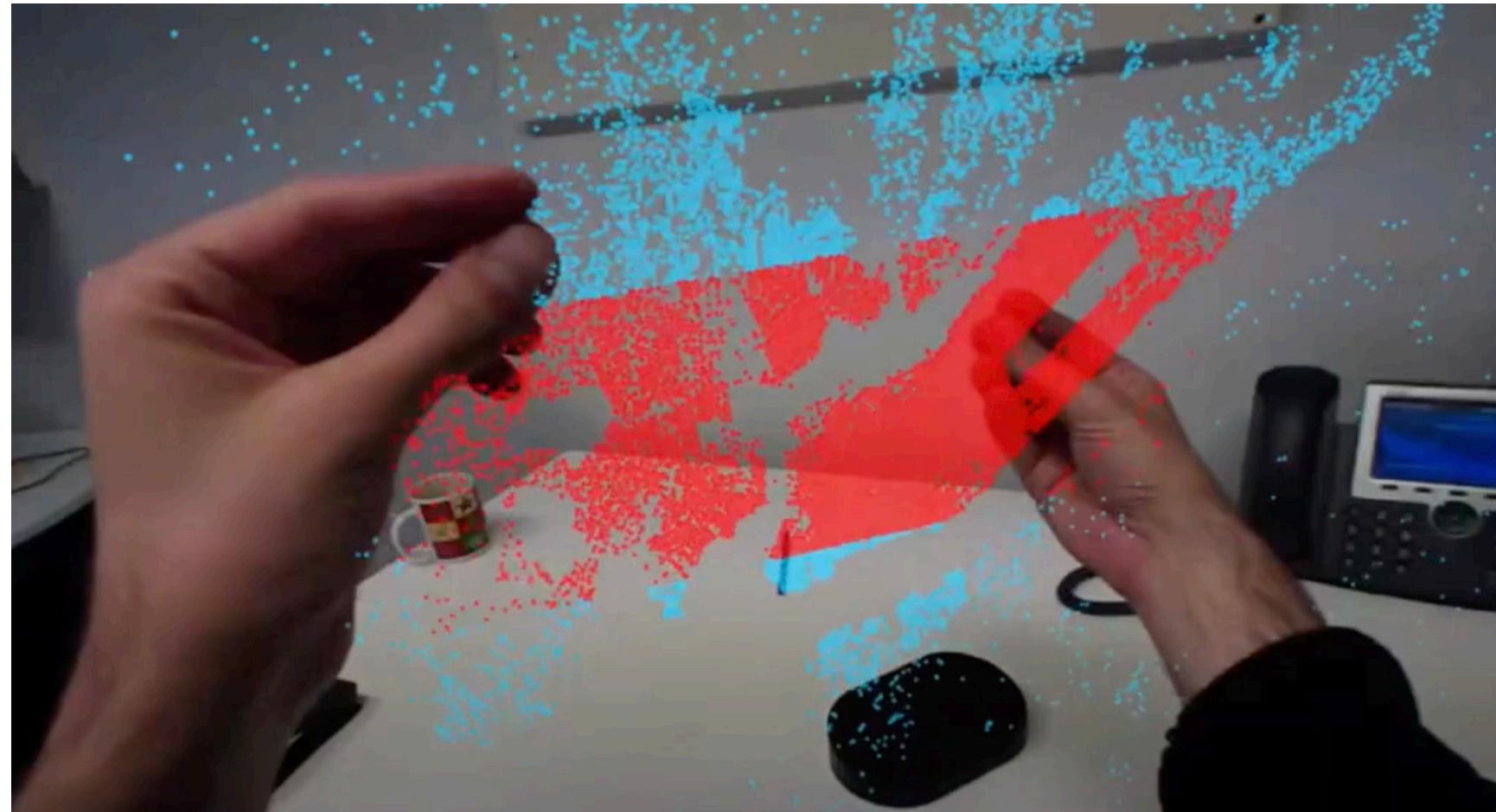
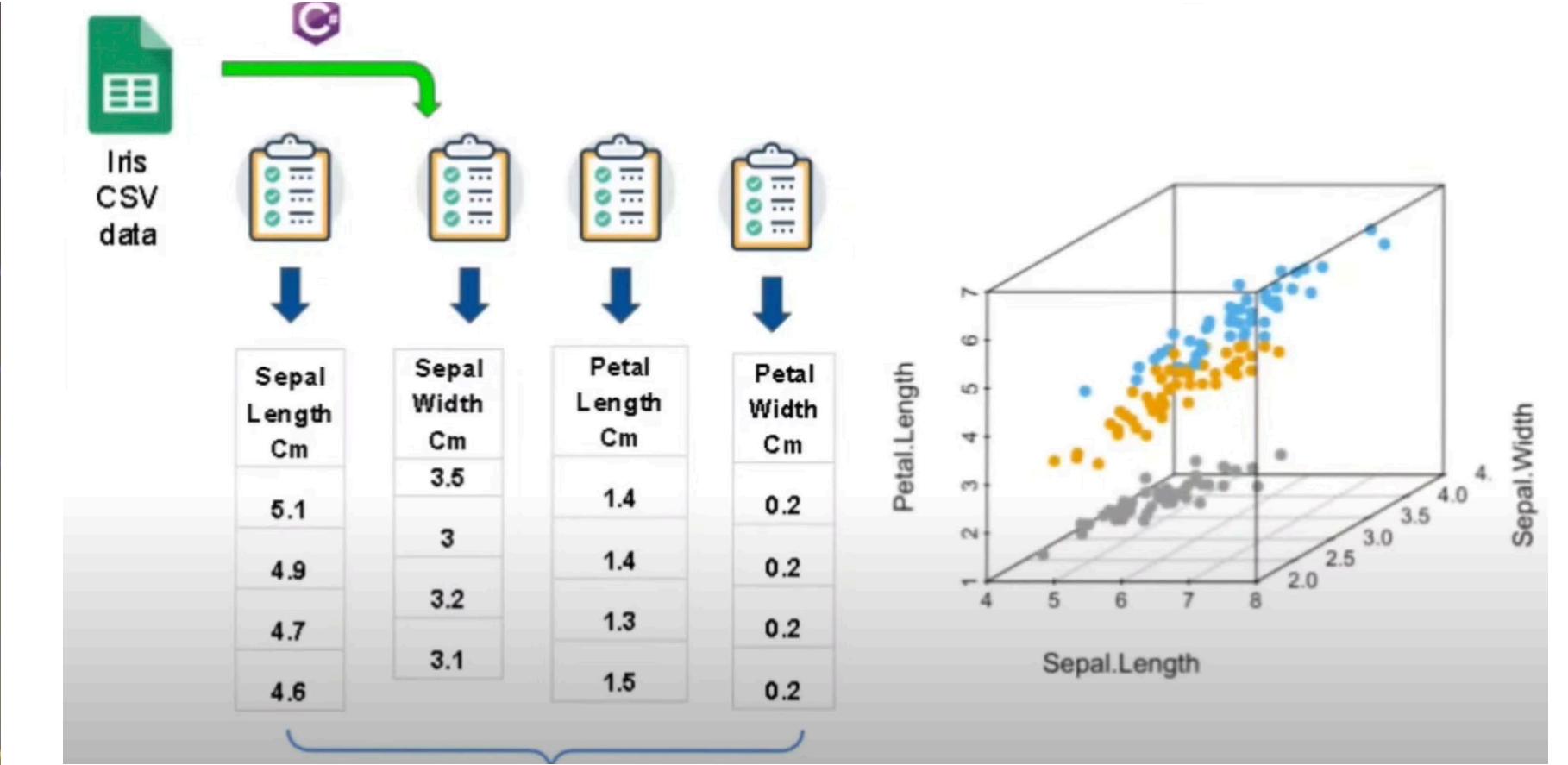
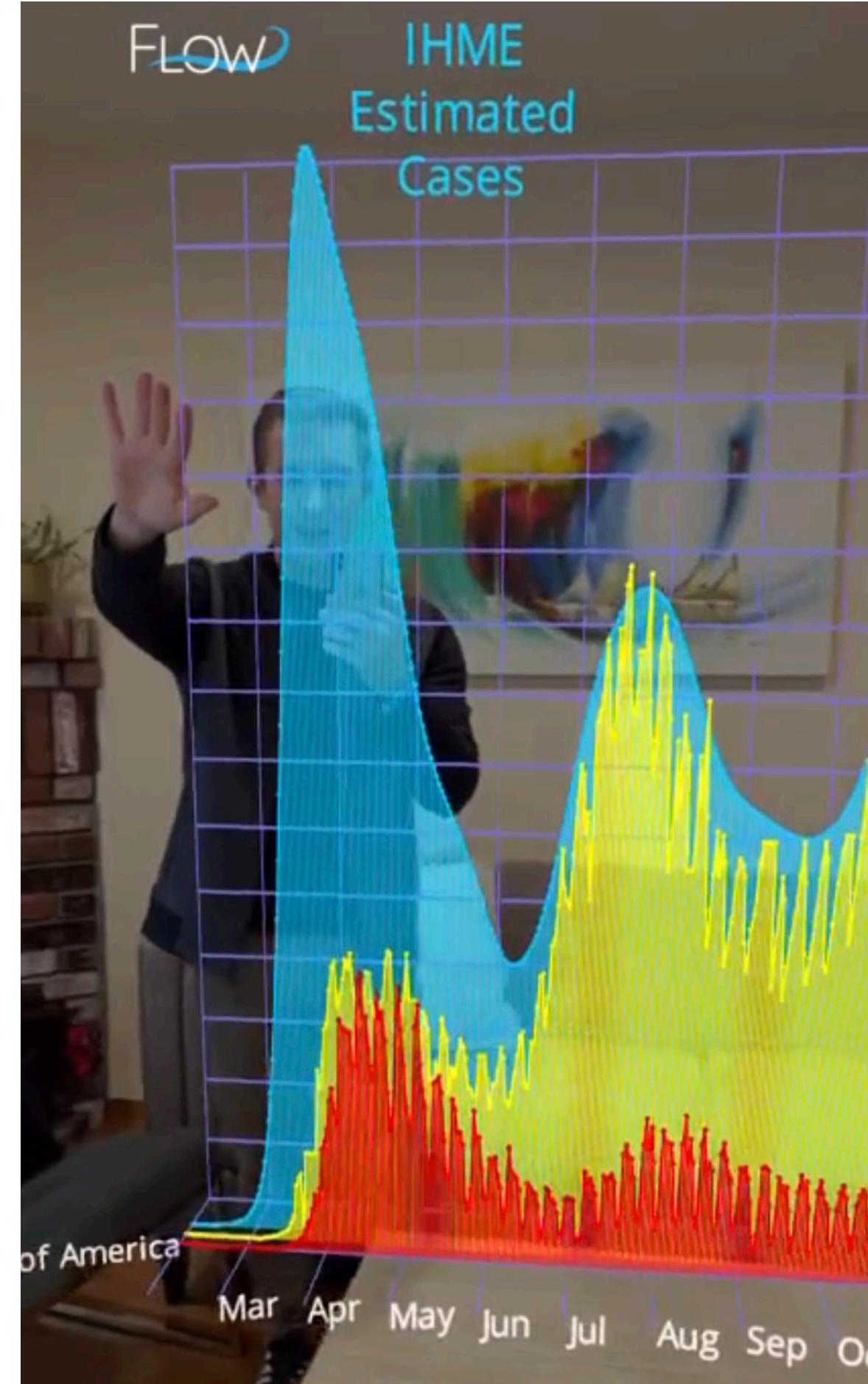
**How might we utilize VR data visualization
can provoke people to think about the
issue of gender discrimination in the real
workplace through reader driven data
explanation method? 🤔**



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VR Data Visualization Case Studies



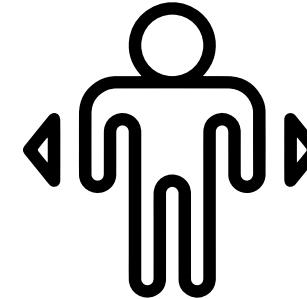
1. <https://www.youtube.com/watch?v=CFdA-n0rPVE>
2. <https://www.youtube.com/watch?v=qjWIPePTsOA&t=45s>
3. <https://wear-studio.com/vr-ar-data-visualization/>
4. <https://www.tiktok.com/@the.data.guy/video/6896580232782941445>
5. <https://towardsdatascience.com/data-visualization-in-virtual-reality-32408475b66>
6. <https://www.zdnet.com/article/data-visualization-via-vr-and-ar-how-well-interact-with-tomorrows-data/>

VR Game Design and Interactive Narrative Storyline

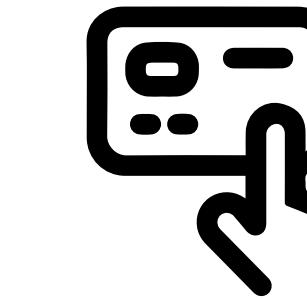
User perspective

1 Start with the roles of HR

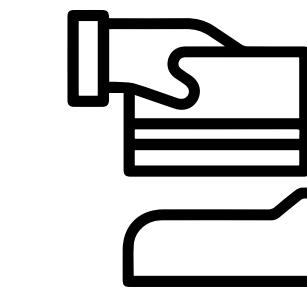
Enter Role



Choose card



Swipe card



See the visualization



2 Design two interactive model based on the two characters

3 Display relevant data (the choices of interaction affect the display of data)



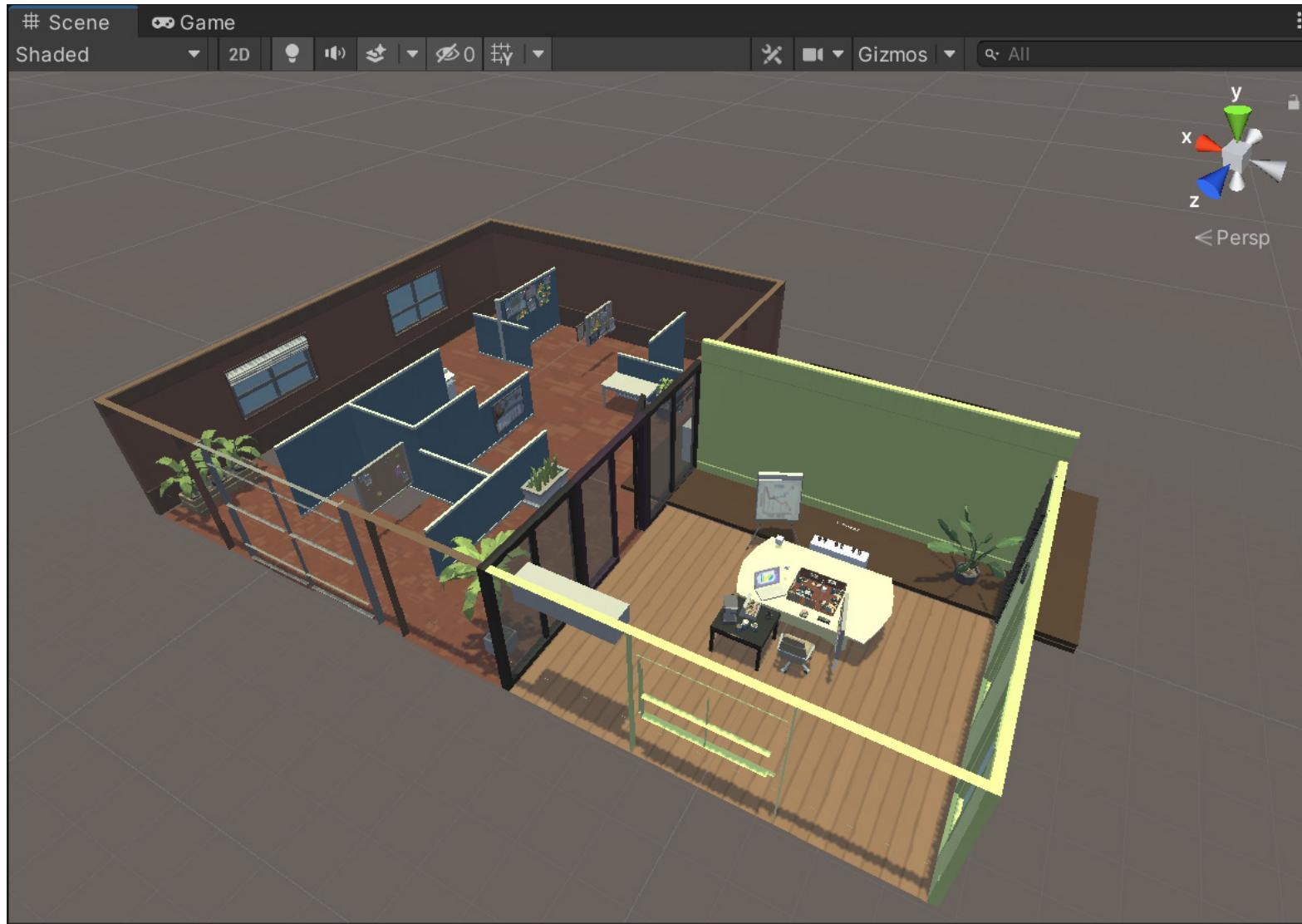
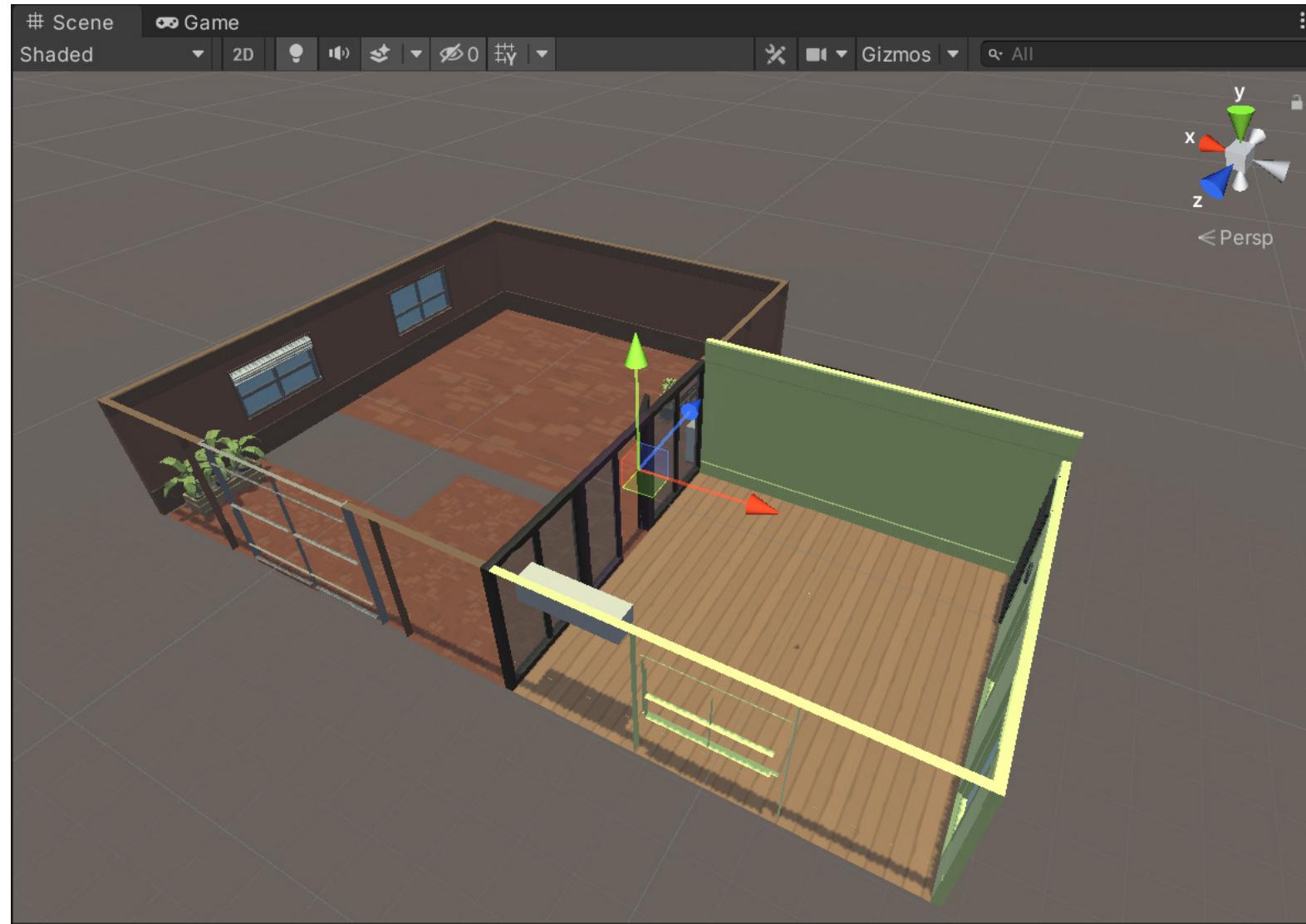
4 Use further external data visualization to provoke people thinking about the issue of gender discrimination in the real workplace.



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Scenario Design



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Business Card Design

CHIEF EXECUTIVE OFFICER



CSR AND SUSTAINABILITY
BUSINESS AND SOCIA IMPACT



DATA CENTER



CUSTOMER SERVICE



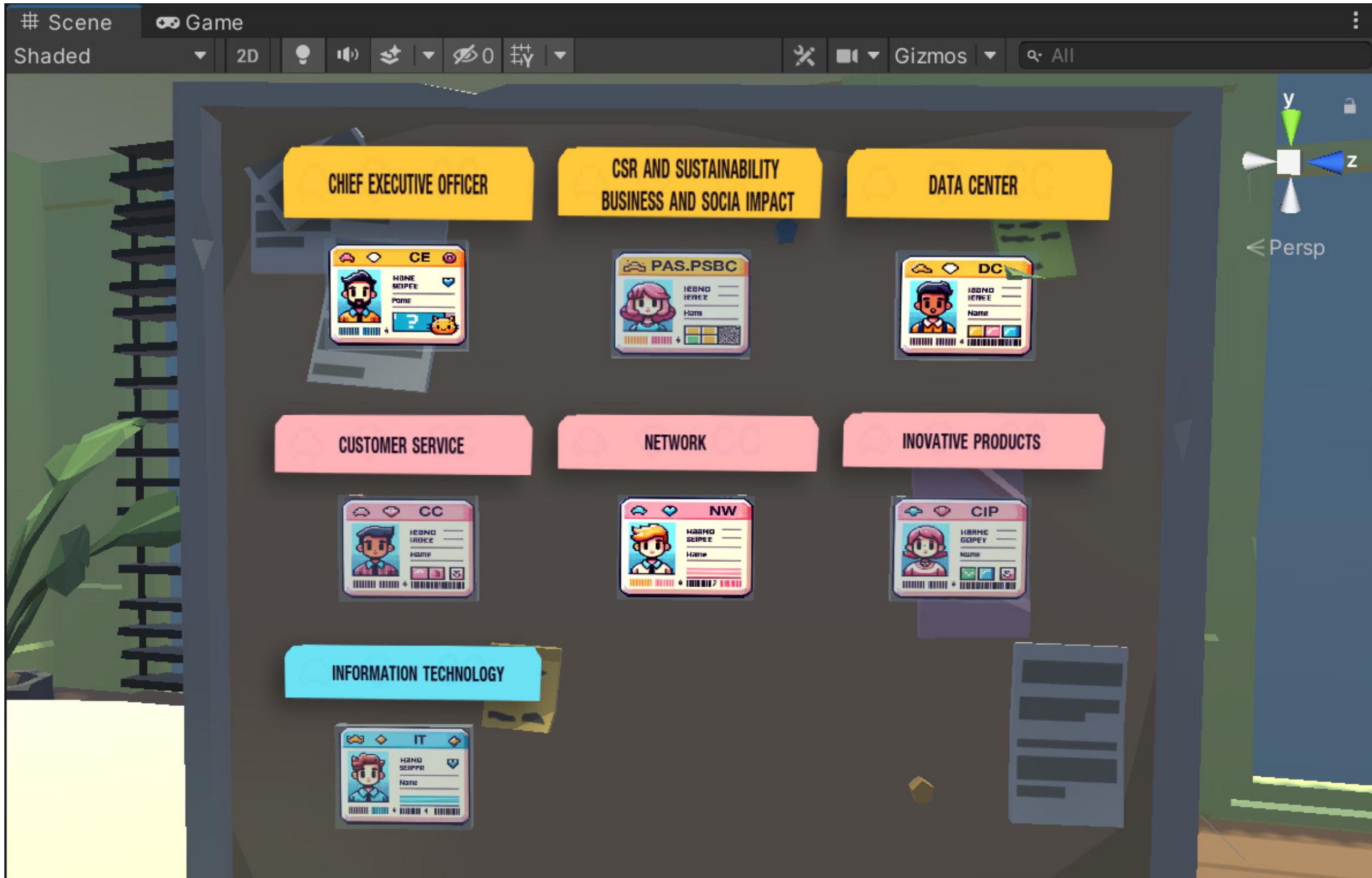
NETWORK



INOVATIVE PRODUCTS



INFORMATION TECHNOLOGY



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3D Data Interaction Design

Gender statistics for all departments and positions



Gender distribution by different department and position



Analysis of the causes of inequality



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Let's play!!!

<https://youtu.be/3gDpF5CvwYI>



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