# Navigating the Future of Work

Group 13

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# Agenda

Overview

Analysis & Visualization

Conclusion

# Objective

- **Persona:**
  - Role: A student preparing to enter the workforce.
  - Goal: Secure a <u>well-paying</u> career with <u>strong growth opportunities</u> and <u>low risk of AI replacement</u>.
- **Challenges:**
  - Navigating a rapidly changing job market shaped by AI and automation.
  - Identifying industries, roles, and locations that align with career aspirations.
  - Acquiring the right mix of skills to remain competitive.
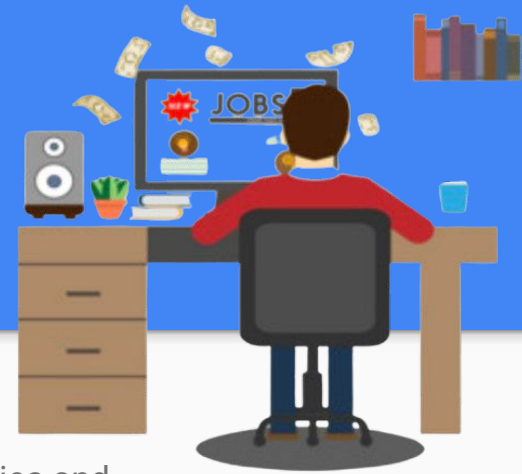
## Key Objectives
- Identify Ideal Jobs
- Analyze Global Opportunities
- Understand Skill Requirements
- Evaluate Salary Distributions

## Ultimate Goal:
Empower students to make strategic career choices by leveraging insights on roles, skills, industries, and locations that best align with their aspirations.

# Data Source

- Analyzing Job Market Trends: Identifying High-Potential Roles Less Likely to Be Replaced by AI, with High Salaries and Strong Growth.
- 500 unique job listings
  - Characterized by different factors: Industry, company size, AI adoption level, etc

Reference: AI-Powered Job Market Insights

# Why should students understand job market trends?

## 1. Navigate Technological Disruptions
Understand automation risks to focus on roles less likely to be replaced by AI.

## 2. Maximize Earning Potential
Analyze salary trends to choose careers with competitive pay and financial alignment.

## 3. Plan for Long-Term Career Growth
Use growth projections to align career paths with stable and advancing roles.

## 4. Identify In-Demand Skills
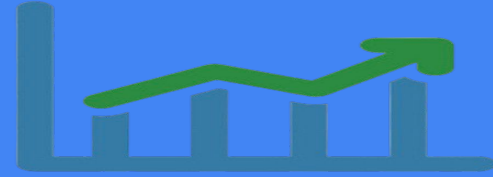Recognize valued skills and tailor education to meet industry needs.

## 5. Adapt to Regional and Global Dynamics
Understand job trends by location to find the best prospects globally.

## 6. Stay Ahead of the Competition
Leverage trends to remain proactive and competitive in a dynamic job market.
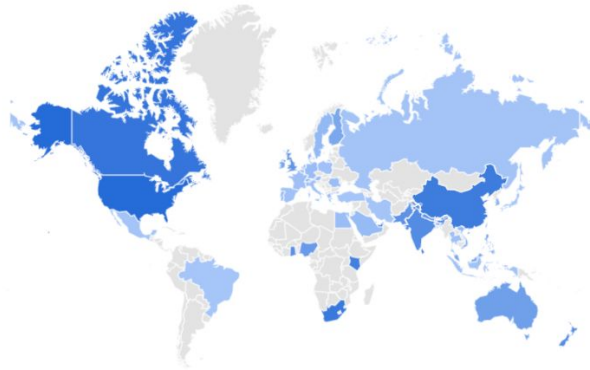
# Google trends



| | Worldwide, Past 12 months |
|---|---|
| ● job market | |

**Interest by region** ⑦

Region ▾  ⬇  〈 〉  ⊷



| 1 | Singapore | 100 |
| 2 | United States | 82 |
| 3 | Sri Lanka | 79 |
| 4 | Hong Kong | 77 |
| 5 | Canada | 72 |

\* Note: A higher value means a higher proportion of all queries, not a higher absolute query count. So a tiny country where 80% of the queries are for "bananas" will get twice the score of a giant country where only 40% of the queries are for "bananas".

# Analysis

Filtering Target Jobs

Job Search Strategies

Correlation Analysis of Key Goals and Variables

Required Skills for Target Jobs

Evaluating Cities Based on Salary

# Data Visualization

**Tableau:**

https://public.tableau.com/views/BIfinalproject_17338511
313740/Dashboard1?:language=zh-TW&publish=yes&:sid=
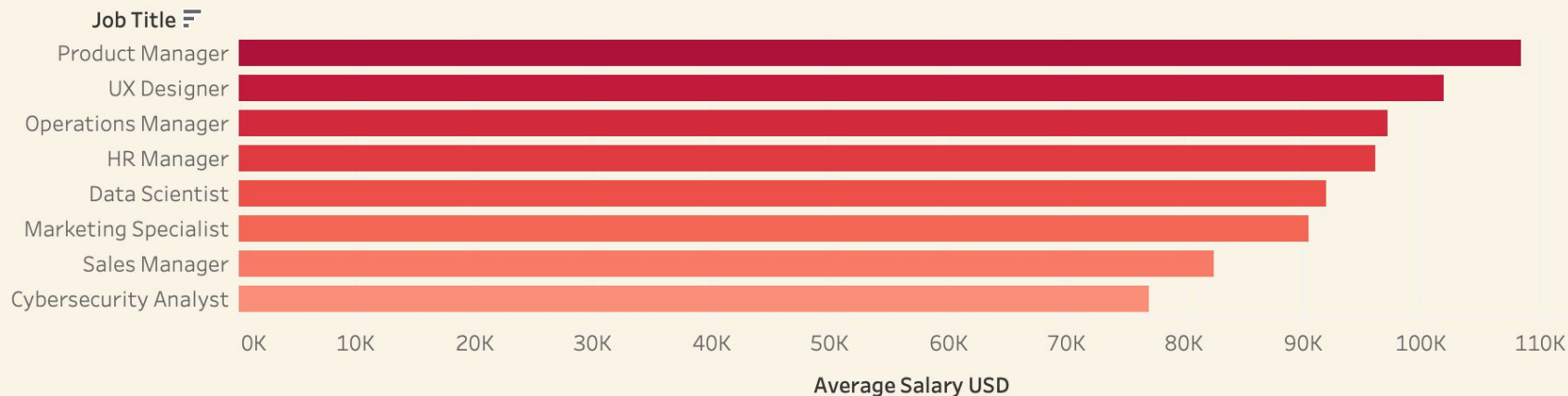&:redirect=auth&:display_count=n&:origin=viz_share_link

**Python:**

https://colab.research.google.com/drive/1LTw0hGpHnhqS
FGwpUwml-J7ypGM3YorY?usp=sharing
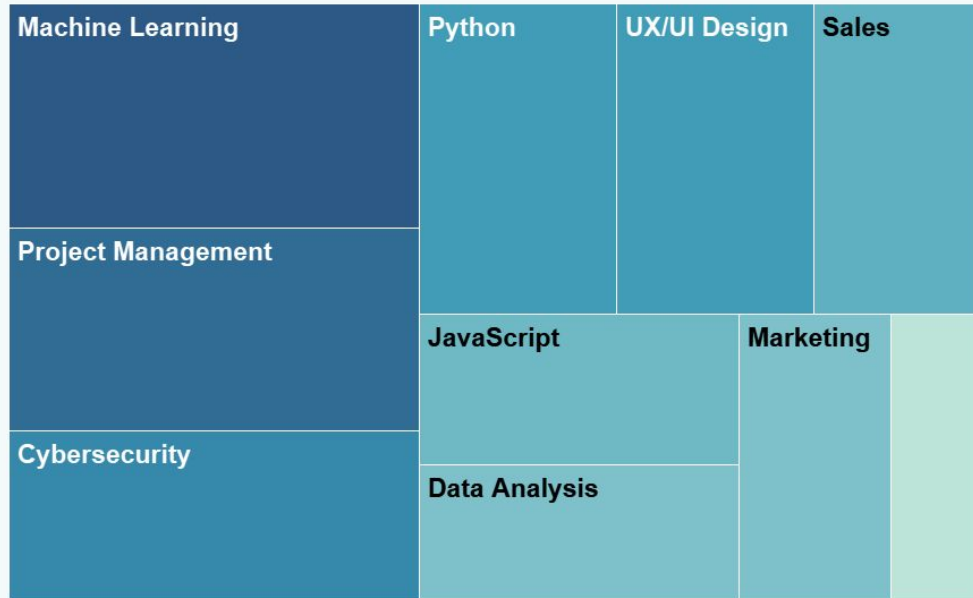
# 1. Filtering Target Jobs

We filter jobs based on three criteria: low automation risk, above-average salaries, and high growth potential. This step identifies roles that align with our career goals and narrows down industries and job types for further analysis.

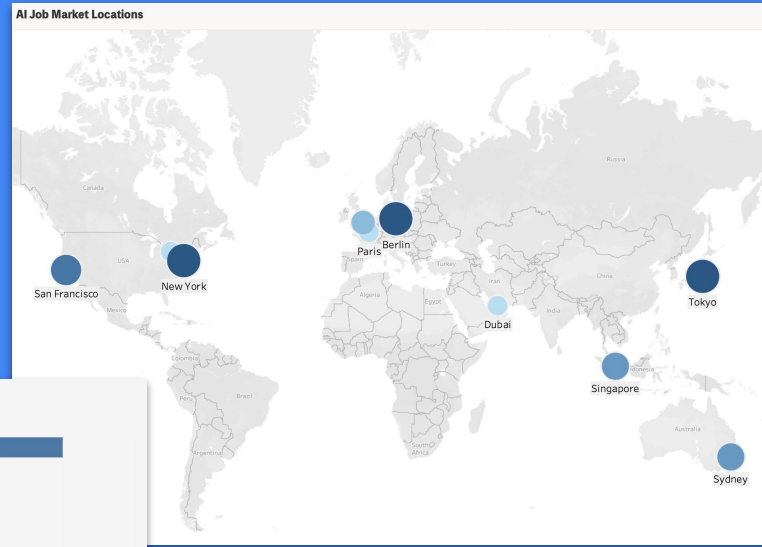**Top 8 Jobs Title - Less Likely to be replaced by AI & Growth Job**

Job Title ⇲

| Job Title | |
|---|---|
| Product Manager | |
| UX Designer | |
| Operations Manager | |
| HR Manager | |
| Data Scientist | |
| Marketing Specialist | |
| Sales Manager | |
| Cybersecurity Analyst | |

0K  10K  20K  30K  40K  50K  60K  70K  80K  90K  100K  110K

**Average Salary USD**

# 2. Required Skills for Target Jobs

**Most Demanded Skills in AI Job Market**

| | | | |
|---|---|---|---|
| Machine Learning | Python | UX/UI Design | Sales |
| Project Management | | | |
| | JavaScript | Marketing | |
| Cybersecurity | Data Analysis | | |

By analyzing the skills needed for jobs identified in the first story point, we can pinpoint in-demand skills across industries. This insight helps us focus on developing the capabilities required for high-potential roles.

# 3. Job Search Strategies


Company Sizes that are more likely to offer Low Automation Risk Jobs
Company Size


Industries Less Likely to be replaced by AI


AI Job Market Locations
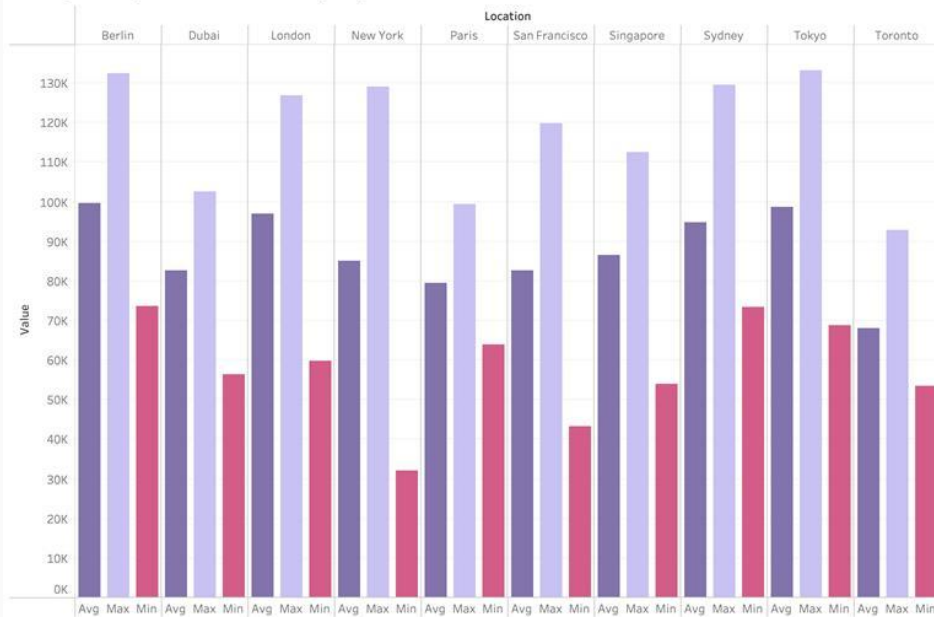

Remote/ Non-Remote AI Powered Jobs
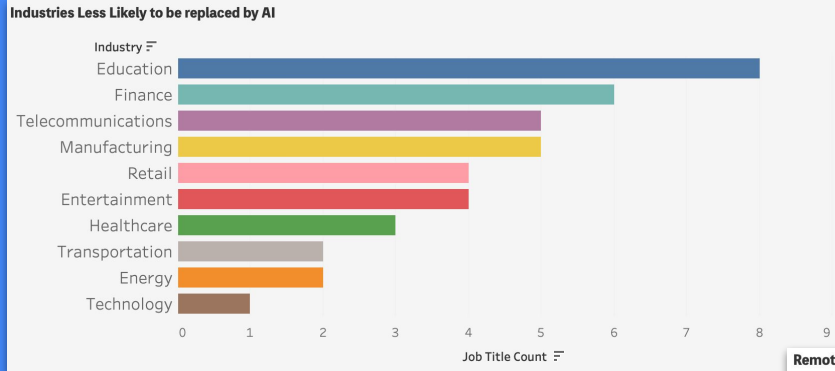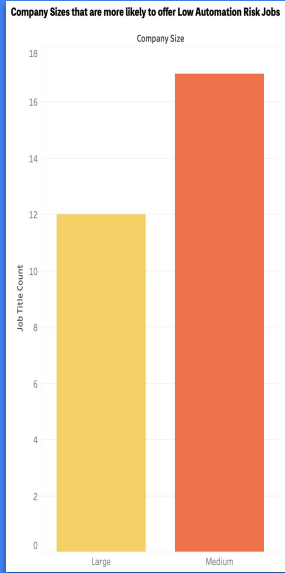
To improve our job search, we explore variables such as company size, location, industry, and remote-work compatibility. This analysis helps us understand where and how to focus our efforts to find jobs that meet our criteria.
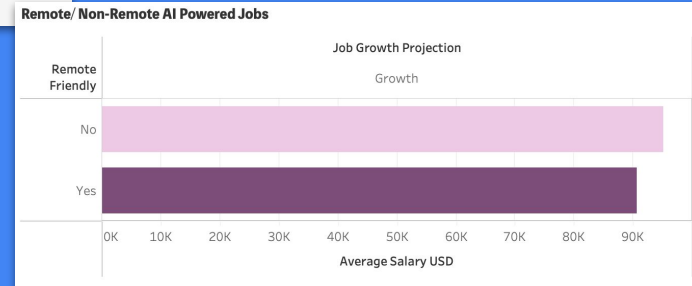
# 4. Evaluating Cities Based on Salary


Average Salary in Different Cities (USD)

We compare the average salaries and salary distributions across major international cities. This helps us determine the best locations for pursuing careers based on job availability, industry trends, and salary consistency.

# 5. Correlation Analysis of Key Goals and Variables

**Automation Risk vs. Salary**: Jobs with low automation risk tend to have higher salaries.

**Growth Projection vs. Salary**: A positive correlation exists between growth potential and salary levels.

**Skills vs. Salary**: High-demand skills like Python, Machine Learning, and UX/UI Design show strong average salaries.
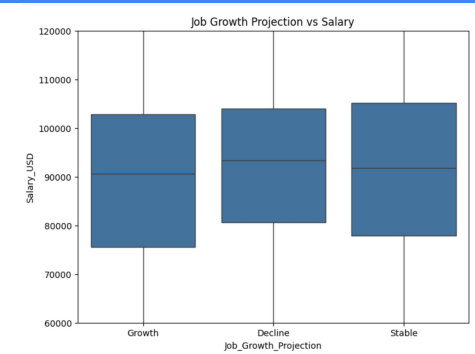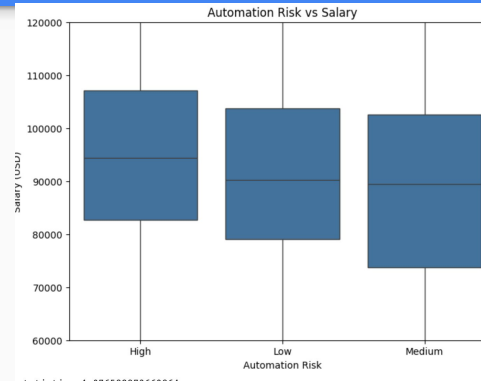
# Actionable Recommendations

- **Skill Development**
  - Technical Skills: Prioritize learning Python, Machine Learning, and UX/UI Design.
  - Soft Skills: Strengthen project management and communication skills to improve cross-departmental collaboration.
- **Career Location**
  - Focus on Berlin, Tokyo, and New York, which offer a combination of salary opportunities and growth industries.
- **Job Strategy**
  - Target medium-sized companies that typically provide more flexible growth opportunities.
  - Consider high-demand industries such as Education and Finance for added stability.
- **Flexibility**
  - Explore remote roles for higher salaries and better work-life balance.

# Conclusion

1. Industry Adaptability:
   Education and finance industries balance low automation risk with stable growth, making them ideal for graduates seeking security.

2. Skill Combination Strategy:
   Students should pursue a learning path combining technical and general skills (e.g., Data Analysis + Marketing) to maximize employment options.

3. Location Selection Considerations:
   Cities like Tokyo and Berlin stand out for balancing salary and living costs, making them attractive for budget-conscious job seekers.

# Reference

- Dataset
  - https://www.kaggle.com/datasets/uom190346a/ai-powered-job-market-insights
- Google Trends
  - https://trends.google.com/trends/explore?q=job%20market&hl=en
- Tableau
  - https://public.tableau.com/views/BIfinalproject_17338511313740/Dashboard1?:language=zh-TW&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link
- Python
  - https://colab.research.google.com/drive/1LTw0hGpHnhqSFGwpUwml-J7ypGM3YorY?usp=sharing

Thank you