AI Impact on Job Market (2024–2030)

Business Intelligence Project
IT300 – Tunis Business School

1 Industry, Organization Description & Business Problem

Industry: Global Labor Market, Education

Context

Artificial Intelligence (AI) is transforming job structures globally. Some roles are rapidly expanding due to technological growth (e.g., data science, machine learning operations, cybersecurity), while others face decline due to automation replacing repetitive tasks. This shift not only affects organizations and governments but also deeply influences students choosing their academic paths and future careers.

Business Problem

Stakeholders lack a consolidated Business Intelligence (BI) view that connects job status, AI impact, salaries, education requirements, experience levels, job openings, automation risks, and country-specific trends.

A BI solution is therefore needed to:

- Identify increasing vs. decreasing jobs.
- Support students in choosing secure and high-opportunity careers.
- Help organizations plan hiring, training, and reskilling strategies.

Organization Scenario

Relevant stakeholders include:

- Labor ministries and government agencies.
- HR departments, recruitment agencies, and management consultancies.
- Universities and career advisors.

- Students identifying safe, high-growth career paths.

Impact on Students

Students entering higher education or vocational training face uncertainty about which careers will remain in demand by 2030. Understanding which jobs are increasing or decreasing helps students to:

- Choose fields with long-term stability.
- Select education programs aligned with future-proof skills.
- Understand required education and experience for high-growth roles.
- Gauge AI impact, automation risk, and salary expectations.

Impact on Labor Market Stakeholders

Labor market institutions and organizations must anticipate workforce changes driven by AI rather than respond after disruptions occur. Understanding which jobs are increasing or decreasing enables stakeholders to:

- Design proactive labor and reskilling policies.
- Align hiring and workforce planning with future demand.
- Reduce skill mismatches between education systems and market needs.
- Make data-driven decisions based on automation risk, salary trends, and country-specific labor dynamics.

2 Analytical Questions

1. Which job titles show the highest projected increase in job openings (2024–2030)?
2. Which job titles show the highest projected decrease in job openings (2024–2030)?
3. Which industries have the greatest number of increasing vs. decreasing jobs?
4. How does job status (Increasing/Decreasing) vary across countries?
5. How does AI Impact Level (Low/Moderate/High) relate to job status?
6. What is the relationship between Automation Risk (%) and industries?
7. Which education levels are most associated with high-growth vs. high-risk jobs?

8. How does the Remote Work Ratio (%) differ between increasing and decreasing jobs?

9. Which industries show high salaries but also high automation risk, and what does this imply for student career choices?

10. Which vulnerable demographic groups (gender, education level) are most exposed to automation?

3 Key Performance Indicators (KPIs)

KPI Name	**Definition / Formula**	**Target / Interpretation**
Net Job Change (2024–2030)	$\text{Projected Openings}_{2030} - \text{Job Openings}_{2024}$	> 0 = growth, < 0 = decline
Percent Job Change (%)	$\frac{\text{Net Job Change}}{\text{Job Openings}_{2024}} \times 100$	$\geq 10\%$ strong growth
Share of Increasing Jobs (%)	$\frac{\text{Jobs with Status = Increasing}}{\text{Total Jobs}} \times 100$	$\geq 60\%$ healthy outlook
Average Automation Risk (%)	AVG(Automation Risk)	$> 60\%$ high risk
AI Impact Intensity Score	AVG(AI Impact Level) (Low = 1, Moderate = 2, High = 3)	> 2.3 strong AI impact
Median Salary Stability Ratio	$\frac{\text{Median Salary (Increasing Jobs)}}{\text{Median Salary (Decreasing Jobs)}}$	> 1 growing jobs better paid
Remote Work Readiness Rate (%)	AVG(Remote Work Ratio)	$\geq 50\%$ high adaptability
Education Vulnerability Rate (%)	$\frac{\text{High-risk jobs with Low/Mid Education}}{\text{Total jobs in education group}} \times 100$	$\geq 50\%$ high vulnerability
Career Stability Index	(1 − Automation Risk) × Percent Job Change	Higher = more stable careers
High-Opportunity Career Score	$0.4 \times \text{Job Growth} + 0.3 \times \text{Salary} + 0.3 \times (1 - \text{Automation Risk})$	≥ 0.7 future-proof careers

Table 1: Key Performance Indicators for AI Impact on the Job Market