Data Dictionary

Business Intelligence Project

Impact of AI on the Labor Market (2024–2030)

Project Information

- **Course**: IT300 – Tunis Business School
- **Dataset**: AI Job Trends Dataset
- **Date**: December 2025
- **Total Records**: 30,000 jobs
- **Total Features**: 19
  - 13 original features
  - 6 derived features
- **Geographic Coverage**: 8 countries
- **Industry Coverage**: 8 sectors

Dataset Overview

This dataset provides a comprehensive view of job market trends influenced by Artificial Intelligence from 2024 to 2030. It covers job titles, industries, salaries, education requirements, automation risks, and projected growth across multiple countries.

Data Quality Summary

- **Completeness**: 100% (no missing values)
- **Duplicates**: None
- **Validation**: All values fall within expected ranges
- **Processing**: Outliers treated using the IQR method

Column Specifications

Original Features (13 Columns)

Column Name	Data Type	Description	Value Range / Examples	Unique Values
Job Title	Text	Name of the job position	Investment Analyst, Financial Planner	639
Industry	Categorical	Industry sector	IT, Finance, Healthcare, Manufacturing	8

Column Name	Data Type	Description	Value Range / Examples	Unique Values
Job Status	Categorical	Job demand trend (2024–2030)	Increasing, Decreasing	2
AI Impact Level	Categorical	Level of AI impact	Low, Moderate, High	3
Median Salary (USD)	Numeric	Annual median salary	$30,001.86 – $149,998.50	568
Required Education	Categorical	Minimum education required	High School → PhD	5
Experience Required (Years)	Integer	Years of experience required	0 – 20	21
Job Openings (2024)	Integer	Number of openings in 2024	100 – 10,000	304
Projected Openings (2030)	Integer	Projected openings in 2030	100 – 10,000	366
Remote Work Ratio (%)	Numeric	Share of remote work	0% – 100%	547
Automation Risk (%)	Numeric	Risk of automation	0.15% – 99.94%	591
Location	Categorical	Country	USA, UK, Germany, India	8
Gender Diversity (%)	Numeric	Gender diversity ratio	20.03% – 79.76%	401

◇ Derived Features (6 Columns)

Column Name	Data Type	Description	Calculation Method	Business Purpose
Net_Job_Change	Integer	Absolute change in openings	Openings (2030) − Openings (2024)	Identify growth or decline
Percent_Job_Change	Numeric	Relative change in openings	((2030 − 2024) ÷ 2024) × 100	Measure growth rate
AI Impact Score	Integer	Quantified AI impact level	Low = 1, Moderate = 2, High = 3	Enable numeric analysis
Career Stability Index	Numeric	Growth adjusted by automation risk	(1 − Automation Risk ÷ 100) × Percent Job Change	Identify stable careers
Median Salary Norm	Numeric	Normalized salary score	(Salary − Min) ÷ (Max − Min)	Fair salary comparison

Column Name	Data Type	Description	Calculation Method	Business Purpose
High-Opportunity Career Score	Numeric	Overall career attractiveness	0.4 × Growth + 0.3 × Salary + 0.3 × Stability	Rank future-proof careers

Data Categories & Distributions

Industry Distribution

- **IT** – Technology and software development
- **Healthcare** – Medical and health services
- **Finance** – Banking and financial services
- **Manufacturing** – Industrial production
- **Transportation** – Logistics and mobility
- **Education** – Academic institutions
- **Entertainment** – Media and creative industries
- **Retail** – Sales and customer service

Geographic Distribution

- USA, UK, Canada, Germany
- Australia, Brazil, India, China

Education Level Distribution

- High School
- Associate Degree
- Bachelor's Degree
- Master's Degree
- PhD

Data Quality Metrics

Quality Dimension	Score	Details
Completeness	100%	No missing values
Uniqueness	100%	No duplicate records
Validity	100%	Values within valid ranges
Consistency	100%	Standardized formats
Accuracy	100%	All checks passed

Document Metadata

- **Document Version**: 1.0

- **Last Updated**: December 21, 2025
- **Dataset Status**: Ready for BI Analysis
- **Quality Assurance**: All validations passed