

# QuantumTalent AI Market Analytics

## 1. Industry context

**Industry:** Artificial Intelligence (AI) & Technology Sector

The AI industry includes companies specializing in machine learning, data science, automation, cloud computing, and AI-driven software solutions.

Human capital is the most critical asset in AI-driven organizations, making *HR analytics* essential for strategic decision-making in businesses.

## 2. Organization Description :

**Organization Name:** QuantumTalent

**Type:** Global AI-focused technology company

**Size:**

- ★ 5,000+ employees worldwide
- ★ Multinational operating across multiple industries

**Goal:** The HR department seeks to better understand *external AI labor market trends* in order to align internal hiring and compensation policies with market realities.

## 3. Business Problem

The organization is facing *significant challenges in attracting, and optimizing AI talent*, including:

- ★ Difficulty identifying which AI skills are most in demand
- ★ Difficulty benchmarking job posting competitiveness
- ★ Salary inconsistencies across countries and roles
- ★ Inefficient workforce planning

→ *How can the organization use HR analytics to understand AI job market trends, optimize recruitment strategies, control labor costs, and improve job posting competitiveness?*

## **4. Business objectives**

This HR analytics use case leverages **AI job market and employee data** to:

- ★ Analyze trends in AI job roles and required skills
- ★ Monitor salary patterns and compensation fairness
- ★ Benchmark job posting competitiveness
- ★ Improve strategic workforce planning

## **5. Business Value**

This HR analytics solution support

- ★ Competitive and equitable salary benchmarking across roles, experience levels, and locations
- ★ Align salaries with market trends
- ★ Skill-based hiring strategies by highlighting skills associated with higher market value
- ★ Improved remote work and benefits policies aligned with industry practices

→ Overall, this use case enhances strategic HR decision-making. By looking into the insights of the AI market, the organization can better align its recruitment and compensation strategies with market realities.

## **6. Analytical Questions :**

1. Which AI job roles are most in demand across different countries?
2. What technical skills are most frequently required for AI-related positions?
3. How has demand for AI jobs evolved over time?
4. What is the average salary for different AI roles (e.g., Data Scientist, ML Engineer, AI Researcher)?
5. How do salaries vary by location, experience level, and job title?
6. How do required skills and years of experience relate to offered salaries for AI roles?
7. How does salary vary by company size (small, medium, large)?
8. What skills are associated with a higher salary?
9. Which industries are posting the most AI roles?
10. How does the remote\_ratio (remote vs hybrid vs on-site) vary by AI role, location, and company size?
11. How does benefits\_score vary by role and industry, and what does this suggest about how attractive or detailed different AI job postings are?

## 7.KPIs

<b>1. AI Job Demand by Role &amp; country</b>  → <i>Identifies which AI roles are most demanded in specific countries.</i>	<b>7. Salary by Company Size</b>  → <i>Shows how compensation differs based on organizational scale.</i>
<b>2. Skill Demand Frequency</b>  → <i>Reveals the most in-demand AI skills for job postings</i>	<b>8. Skill Premium Index</b>  → <i>Identifies skills associated with higher salaries.</i>
<b>3. AI Job Demand Growth Rate</b>  → <i>Shows how AI job demand is evolving over time.</i>	<b>9. Industry AI Hiring Share</b>  → <i>Identifies industries most actively hiring AI professionals.</i>
<b>4. Average Salary by AI Role</b>  → <i>Allows comparison of compensation across AI positions.</i>	<b>10. Remote Work Ratio</b>  → <i>Shows flexibility trends across roles, locations, and company sizes.</i>
<b>5. Salary Variation Index</b>  → <i>Highlights salary inequality and country differences.</i>	<b>11. Benefits Attractiveness Score</b>  → <i>Indicates how detailed and attractive job offers are beyond salary.</i>
<b>6. Experience–Salary Correlation</b>  → <i>Measures how strongly experience impacts compensation.</i>	<b>12. High-Value Role Index</b>  → <i>Identifies the most competitive AI job offerings.</i>