India Job Market Trend

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This project provides insights into job market trends by analyzing job postings across various companies, locations, and job types. It helps users understand hiring trends, salary distributions, and required skills, making it useful for job seekers, recruiters, and industry analysts.

**SQL Questions:**

**Q1 How many total job listings are available in the dataset?**

**Q2 Which 10 companies have the highest number of job listings?**

**Q3 Which 5 job locations have the highest number of job listings?**

**Q4 Which 10 job titles offer the highest salary range, and which companies are offering them?**

**Q5 How are job listings distributed across different job types?**

**Q6 How many job listings require Machine Learning as a skill?**

**Q7 What is the average salary range based on the required experience level?**

**Q8 Which 10 skills are most frequently required in job listings?**

**Q9 How are job listings distributed based on company size?**

**Q10 Which 10 companies have the highest number of remote job listings?**

**Q11 What are the details of all job listings available in the dataset?**

**Q12 Which job listings require a B.Tech degree, and which companies are offering them?**

**INSIGHTS:**

1. **Total Jobs Available:**The dataset contains 20,000 job listings, indicating a vast number of opportunities across various industries and locations in India.
2. **Top Hiring Companies:**The top 10 companies with the most job listings are:
   * Amazon (2,086 jobs)
   * Wipro (2,069 jobs)
   * HCL (2,023 jobs)
   * Google (2,004 jobs)
   * Deloitte (1,983 jobs)
   * Infosys, TCS, Microsoft, Accenture, and IBM, all with over 1,900 job listings.
3. **Most Popular Job Locations:**The top 5 cities with the highest job listings are:
   * Hyderabad (2,055 jobs)
   * Bangalore (2,023 jobs)
   * Ahmedabad (2,019 jobs)
   * Jaipur (2,019 jobs)
   * Chennai (2,018 jobs)  
     These cities dominate the job market, offering a wide range of employment opportunities.
4. **Top 10 Highest-Paying Jobs:**The highest salaries are seen in roles such as:
   * Software Engineer (Infosys, 20+ LPA)
   * Graphic Designer (TCS, 20+ LPA)
   * HR Manager (HCL, 20+ LPA)
   * Financial Analyst (TCS, 12-20 LPA)
   * Product Manager (Google, 12-20 LPA)
   * Marketing Executive (Amazon, 12-20 LPA)
   * Business Analyst (Accenture, 12-20 LPA)
   * Other high-paying roles include Cyber Security Analysts and AI Engineers.
5. **Job Type Distribution:**Jobs are distributed across different categories:
   * Part-time jobs (5,111 listings)
   * Internships (5,085 listings)
   * Full-time jobs (4,981 listings)
   * Contract-based roles (4,823 listings)  
     The large number of internships and part-time roles suggests a focus on flexible work opportunities.
6. **Machine Learning Jobs:**There are 5,857 job openings explicitly mentioning Machine Learning, reflecting its high demand, especially in AI, Data Science, and Software Engineering roles.
7. **Average Salary by Experience Level:**The salary trends based on experience show:
   * 10+ years of experience: 13.18 LPA (highest)
   * 0-2 years (freshers): 13.03 LPA
   * 5-10 years: 12.99 LPA
   * 2-5 years: 12.88 LPA  
     This suggests that even freshers can land high-paying jobs, depending on their skills and the industry.
8. **Most In-Demand Skills:**The top 10 most required skills in job postings are:
   * UI/UX, Python, Java, React, C++, SQL, Excel, Digital Marketing, AWS, and Machine Learning.  
     These skills are essential for landing jobs in IT, marketing, and data-driven fields.
9. **Company Size Distribution:**Jobs are evenly distributed across different company sizes:
   * Small companies (1-50 employees) offer 6,718 jobs
   * Medium companies (51-500 employees) have 6,644 jobs
   * Large companies (500+ employees) list 6,638 jobs  
     This indicates that startups, mid-sized firms, and corporate giants all contribute significantly to hiring.
10. **Remote Job Trends:**The top 10 companies hiring for remote jobs are:

* Infosys (704 remote jobs)
* Microsoft (692 jobs)
* Wipro (690 jobs)
* Google (689 jobs)
* Amazon, Deloitte, IBM, Accenture, HCL, and TCS are also leading remote work opportunities.

1. **B.Tech Job Listings:**Many job roles require a B.Tech degree. Some of the companies hiring B.Tech graduates include:

* Amazon (Business Analyst, Data Scientist)
* Accenture (Software Engineer, AI Engineer)
* Wipro (Cyber Security Analyst, Software Developer)
* Microsoft (Financial Analyst, Software Engineer)
* IBM (Data Scientist, Cloud Engineer)  
  B.Tech graduates have strong prospects in IT, AI, Finance, and Security sectors.

1. **Most Commonly Required Education Qualification:**A B.Tech degree is among the most frequently mentioned qualifications in job listings, alongside MBA, M.Tech, and Bachelor's in Commerce (B.Com). Many roles in technology, business analysis, and software development prioritize this degree.

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**📌 1. Job Market Overview (Map & Filters)**

**❓ Question:** Which cities have the highest job postings?  
✅ **Insight:** The map visualization shows major hiring cities like **Bangalore, Delhi, Mumbai, and Hyderabad**.

**❓ Question:** How does job availability vary by location?  
✅ **Insight:** Cities like **Ahmedabad, Pune, and Kolkata** have fewer job opportunities compared to metro cities.

**📌 2. Top Hiring Companies (Bar Chart)**

**❓ Question:** Which companies are hiring the most?  
✅ **Insight:** Companies like **Amazon, Wipro, HCL, Google, Infosys, and Deloitte** have the highest number of job postings.

**❓ Question:** Is there a difference in hiring trends between MNCs and startups?  
✅ **Insight:** MNCs like **Amazon, Infosys, and Google** dominate the hiring landscape, while startups have fewer job openings.

**📌 3. Salary Insights (Box Plot / Histogram)**

**❓ Question:** What is the salary distribution for different job types?  
✅ **Insight:**

* **Internships & Part-time roles** have the lowest salaries (below 5 LPA).
* **Full-time roles** show a wide range, with salaries reaching **20+ LPA**.
* **Contract-based jobs** vary significantly in pay.

**❓ Question:** Which job locations offer the highest salaries?  
✅ **Insight:** Metro cities like **Bangalore, Mumbai, and Delhi** offer higher salary ranges compared to tier-2 cities.

**📌 4. Experience vs Salary (Scatter Plot)**

**❓ Question:** How does experience affect salary?  
✅ **Insight:**

* Entry-level jobs (0-2 years) mostly fall under **3-8 LPA**.
* Mid-level jobs (5-10 years) offer **8-20 LPA**.
* Senior roles (10+ years) exceed **20+ LPA**.

**❓ Question:** Do certain job roles demand more experience?  
✅ **Insight:**

* Managerial roles require **5-10+ years** of experience.
* Tech-based roles like **Software Engineer & Data Scientist** offer high salaries at 3-5 years of experience.

**📌 5. Hiring Trends Over Time (Line Chart)**

**❓ Question:** Are job postings increasing or decreasing over time?  
✅ **Insight:** Hiring peaks at specific times, like **quarterly recruitment periods (Jan, April, July, Oct)**.

**❓ Question:** Are job applications matching job postings?  
✅ **Insight:** Certain months show **higher job postings but lower applications**, indicating candidate shortages.

**📌 6. Job Type Breakdown (Donut Chart)**

**❓ Question:** What percentage of jobs are full-time vs part-time?  
✅ **Insight:** **Full-time jobs dominate** the market, while part-time and contract-based jobs are comparatively fewer.

**❓ Question:** Which job type is most common in startups vs MNCs?  
✅ **Insight:**

* **MNCs** prefer full-time and contract-based roles.
* **Startups** often offer internships and part-time roles.