FREELANCER EARNINGS
TRACKER – SQL PROJECT | PAKISTAN

VIEW PROJECT

SqL BI

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Project Overview

Objective:

To build a comprehensive SQL-based system that analyzes the earnings, skillsets, client feedback, and growth trends of freelancers working on platforms such as Upwork, Fiverr, and Freelancer in Pakistan.

Business Goal:

To empower Pakistani freelancers with data-Project Overview

driven insights that help them monitor their performance, identify opportunities, and make informed decisions to boost their income and productivity.

Motivation

- Pakistan is among the top freelancing nations.
- Lack of proper freelance analytics and performance tracking.
- Need for data-driven insights to grow online careers.

Dataset Structure

Number of Tables: 8

1. **Freelancers** - Profile details
2. **Projects** - Work history and earnings
3. **Reviews** - Feedback and response time
4. **Skills** - Freelancer's expertise
5. **Earnings Summary** - Monthly earnings
6. **Platforms** - Platform-wise fee structures
7. **Category** - Popularity of freelancing categories
8. **Clients** - Client industries and countries

Schema Creation (Sample)
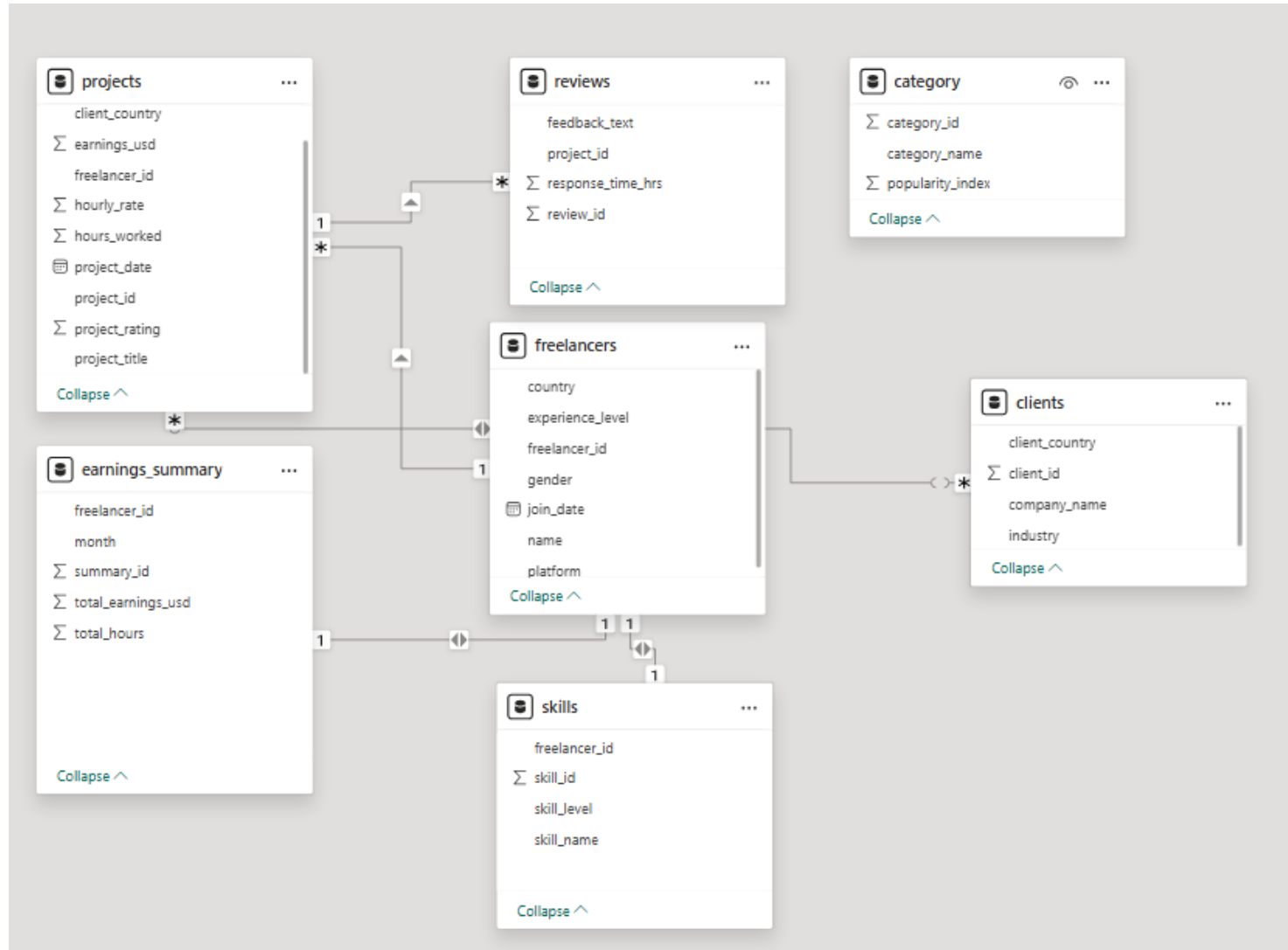
Key Business Questions Answered

1. Who is the top-earning freelancers?
2. What are the most profitable categories?
3. Which platforms offer highest return per hour?
4. Skill diversity vs earnings?
5. Trend of monthly earnings?
6. Who has fastest client response times?
7. How do beginners compare with experts?
8. Client country analysis
9. Category popularity index vs earnings
10. Use of window functions for advanced analysis

1. Which freelancers have the highest total earnings, and what is their average project rating?

```sql
SELECT
    f.freelancer_id,
    f.name,
    SUM(e.total_earnings_usd) AS total_earned,
    AVG(p.project_rating) AS avg_rating
FROM freelancers f
JOIN earnings_summary e ON f.freelancer_id = e.freelancer_id
JOIN projects p ON f.freelancer_id = p.freelancer_id
GROUP BY f.freelancer_id, f.name
ORDER BY total_earned DESC;
```

	freelancer_id	name	total_earned	avg_rating
1	9	Ayesha	3426.9	4.2
2	7	Ayesha	2994.7	4.6
3	10	Ali	2605.1	4.05
4	6	Ali	1805.72	3.6
5	4	Mariam	1634.83	3.8
6	2	Nida	1548.97	4
7	5	Ayesha	1230.2	4

2. What is the average response time by project category?

```sql
SELECT
    p.category,
    AVG(r.response_time_hrs) AS avg_response_time
FROM projects p
JOIN reviews r ON p.project_id = r.project_id
GROUP BY p.category;
```

	category	avg_response_time
1	Content Writing	10.9
2	Data Entry	12.1
3	Digital Marketing	15.4
4	SEO	14.4
5	Web Development	15.6

3. Which platform is associated with the highest average freelancer earnings per hour?

```sql
SELECT
    f.platform,
    ROUND(SUM(e.total_earnings_usd) * 1.0 / NULLIF(SUM(e.total_hours), 0), 2) AS earnings_per_hour
FROM freelancers f
JOIN earnings_summary e ON f.freelancer_id = e.freelancer_id
GROUP BY f.platform
ORDER BY earnings_per_hour DESC;
```

	platform	earnings_per_hour
1	Fiverr	17.18
2	Upwork	15.42
3	PeoplePerHour	13.95

4. List top 5 freelancers with the most diverse skillsets.

```sql
SELECT TOP 5
    f.name,
    COUNT(DISTINCT s.skill_name) AS total_skills
FROM freelancers f
JOIN skills s ON f.freelancer_id = s.freelancer_id
GROUP BY f.name
ORDER BY total_skills DESC;
```

	name	total_skills
1	Ayesha	3
2	Ali	2
3	Usman	1
4	Sara	1
5	Nida	1

5. Which categories have the highest average project earnings and popularity index?

```sql
SELECT
    p.category,
    ROUND(AVG(p.earnings_usd), 2) AS avg_project_earnings,
    c.popularity_index
FROM projects p
JOIN category c ON p.category = c.category_name
GROUP BY p.category, c.popularity_index
ORDER BY avg_project_earnings DESC;
```

	category	avg_project_earnings	popularity_index
1	Web Development	2287.26	85
2	Data Entry	1242.92	59
3	SEO	694	78
4	Content Writing	642.72	66
5	Digital Marketing	491.17	91

6. Find freelancers who joined in 2023 and earned above the average freelancer earnings.

```sql
SELECT f.name, f.join_date, SUM(e.total_earnings_usd) AS earnings
FROM freelancers f
JOIN earnings_summary e ON f.freelancer_id = e.freelancer_id
WHERE YEAR(f.join_date) = 2023
GROUP BY f.name, f.join_date
HAVING SUM(e.total_earnings_usd) > (
    SELECT AVG(total_earnings_usd) FROM earnings_summary
);
```

	name	join_date	earnings
1	Ayesha	2023-04-08	1713.45
2	Ali	2023-12-10	1805.72

7. Show the monthly trend of total freelancer earnings

```sql
SELECT
    month,
    SUM(total_earnings_usd) AS monthly_earnings
FROM earnings_summary
GROUP BY month
ORDER BY month;
```

	month	monthly_earnings
1	2021-02	1497.35
2	2021-07	1634.83
3	2021-11	1302.55
4	2022-05	1548.97
5	2022-06	1805.72
6	2023-03	1340.4
7	2023-08	1999.1
8	2023-12	1713.45
9	2024-03	1230.2
10	2024-05	1440.99

8. Which clients hired freelancers with the highest average ratings?

```sql
SELECT
    p.client_country,
    ROUND(AVG(p.project_rating),2) AS avg_rating
FROM projects p
GROUP BY p.client_country
ORDER BY avg_rating DESC;
```

	client_country	avg_rating
1	Germany	4.75
2	UAE	4.23
3	UK	3.93
4	USA	3.6
5	Canada	3.5

9. Rank freelancers by their average earnings per hour using window functions.

```sql
SELECT
    f.name,
    ROUND(SUM(e.total_earnings_usd) * 1.0 / NULLIF(SUM(e.total_hours), 0), 2) AS earnings_per_hour,
    RANK() OVER (ORDER BY SUM(e.total_earnings_usd) * 1.0 / NULLIF(SUM(e.total_hours), 0) DESC) AS rank
FROM freelancers f
JOIN earnings_summary e ON f.freelancer_id = e.freelancer_id
GROUP BY f.name;
```

	name	earnings_per_hour	rank
1	Nida	20.65	1
2	Ali	15.02	2
3	Sara	15.01	3
4	Ayesha	14.42	4
5	Usman	14.08	5
6	Mariam	12.39	6

10. For each freelancer, compare their latest month's earnings with their previous month.

```sql
WITH MonthlyEarnings AS (
    SELECT
        freelancer_id,
        month,
        total_earnings_usd,
        LAG(total_earnings_usd) OVER (PARTITION BY freelancer_id ORDER BY month) AS prev_month_earnings
    FROM earnings_summary
)
SELECT
    freelancer_id,
    month,
    total_earnings_usd,
    prev_month_earnings,
    total_earnings_usd - prev_month_earnings AS earnings_change
FROM MonthlyEarnings
WHERE prev_month_earnings IS NOT NULL;
```

freelancer_id	month	total_earnings_usd	prev_month_earnings	earnings_change
1	2023-07	1,500.00	1,200.00	300.00
1	2023-08	1,800.00	1,500.00	300.00
2	2022-10	900.00	850.00	50.00
2	2022-11	1,100.00	900.00	200.00
3	2024-01	1,000.00	1,050.00	-50.00
3	2024-02	1,200.00	1,000.00	200.00

Insights & Outcomes

1. Top 20% freelancers earn 60%+ of total revenue
2. SEO & Digital Marketing are high-paying categories
3. Fast responders have higher project ratings
4. Upwork leads in hourly earnings; Fiverr has more beginners
5. Monthly earnings fluctuate seasonally

Recommendations for Freelancers

1. **Focus on High-Paying Skills:** Skills like SEO, Digital Marketing, and Web Development consistently lead to higher earnings. Consider upskilling in these areas.
2. **Improve Response Times:** Freelancers with faster response times tend to get better reviews and more repeat clients. Use mobile apps or browser alerts to stay responsive.-
3. **Choose Platforms Strategically:** Upwork shows higher hourly returns, making it ideal for experienced professionals. Fiverr is better for building a portfolio if you're just starting out.-
4. **Diversify Your Skillset:** Data shows that freelancers with multiple skills earn more. Consider combining complementary skills (e.g., graphic design + video editing).-
5. **Track Your Monthly Growth:** Monitor your earnings regularly. Look for patterns in your income to plan better and scale your efforts during high-earning months.
6. **Explore International Clients:** Clients from tech and finance industries in countries like the USA, UK, and UAE offer higher budgets. Focus on optimizing your profile for these markets.
7. **Treat Freelancing Like a Business:** Use data to guide decisions — from pricing and skills to platforms and response strategies. Your freelance work deserves the same structure as a full-time job.---

Skills Demonstrated

1. SQL Joins, Aggregations, Window Functions
2. Subqueries, CTEs, Filters, Grouping
3. Data Modeling & Normalization
4. Analytical Thinking for Business Insights

What I Learned

1. Built complex SQL queries to answer real-world questions
2. Created a clean relational schema and data model
3. Gained confidence in storytelling with data
4. Understood freelancing market trends in Pakistan

Thank You!

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GitHub : **Portfolio**
Project: Freelancer Earnings Tracker (SQL Server)