

C4U Personalized Course Recommender System

Project Visibility Analysis Executive Summary Report

ISSUE / PROBLEM

We aim that our recommender system can quickly find new interested course. better paving learning path and more learners interacting with more courses. So far. we only have 34.000 users which only 30% have participated more than 10 courses.

Revenue Forecast

Monthly Revenue Forecast									
Revenue Y1	Increase Revenue Y1	Revenue Y2	Increase Revenue Y2	Revenue Y3	Increase Revenue Y3	Revenue Y4	Increase Revenue Y4	Revenue Y5	Increase Revenue Y5
\$ 280,500.00	\$ 25,500.00	\$ 308,550.00	\$ 28,050.00	\$ 339,405.00	\$ 30,855.00	\$ 373,345.50	\$ 33,940.50	\$ 410,680.05	\$ 37,334.55
User Y1	Increase User Y1	User Y2	Increase User Y2	User Y3	Increase User Y3	User Y4	Increase User Y4	User Y5	Increase User Y5
37,400	3,400	41,140	3,740	45,254	4,114	49,779	4,525	54,757	4,978

Application Expenses Baseline

Monthly Expenses	Expenses	Percent per Revenue
Developer Salaries and Other Overheads	\$ 37.950.00	14.88%
Development and maintenance costs	\$ 10.000.00	3.92%
Frontend Cloud Cost	\$ 87.30	0.03%
Backend Framework Cost	\$ 59.95	0.02%
Backend Cloud Cost	\$ 173.95	0.07%
Backend Caching Cost	\$ 12.96	0.01%
Backend Message Queues Cost	\$ 50.00	0.02%
DevOps Cost	\$ 573.28	0.22%
VPn Gateway Cost	\$ 365.30	0.14%
Total Monthly Expenses	\$ 49.272.74	19.32%
Cost per user	\$ 1.45	

Project/ML Expenses

Additional Monthly Expenses		Percent per Revenue
Data Analytics Salaries and Other Overheads	\$ 23,575.00	9.25%
Recommender System Cost	\$ 766,70	0.30%
Total Additional Monthly Expenses from Recommender System	\$ 24,341.70	9.55%

Increase Expense All Year	10%
Discount Rate	10%
Initial Investment	\$ 87.833,40
Year 1 Cash Flow	\$ 13.899,60
Year 2 Cash Flow	\$ 20.157,90
Year 3 Cash Flow	\$ 27.042,03
Year 4 Cash Flow	\$ 34.614,57
Year 5 Cash Flow	\$ 42.944,37
NPV	\$ 12.086,39
IRR	14,36%

INSIGHTS/NEXT STEPS

- NPV: A positive NPV of **\$12,086.39** indicates that the investment is profitable and adds value. given the discount rate of 10%.
- IRR: An IRR of **14.36%** is significantly higher than the discount rate of 10%. suggesting that the investment's returns exceed the cost of capital.
- Initial Investment **\$87,833.4**
- Total Present Value of Future Cash Flow **\$99,919.79**
- **Cost and Benefit Ratio** of **1.14** and **CAC** of **\$ 93.16**
- With 40% Gross Margin, **LTV** = \$56.8 Mio and LTV/CAC Ratio of ~610
- **Consider increase revenue more than incremental 10%** or reduce initial investment
- **Only less than 45%** of the total courses have been chosen by users, Review courses