

# Artha Sathi

(also called financial companion in sanskrit)

By Sanjayprasad S



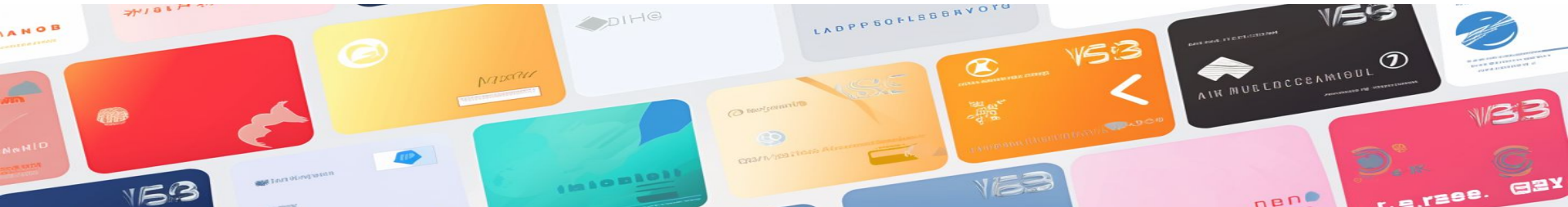


## Personal Experience

- Getting a Credit card !
- Trying to change the phone number
- The really long robo calls,
- The bad service - SLA( service level agreements of over a week
- The complexity to even apply to the credit card.
- Overly bureaucratic process.

# Credit cards selection for Customer

- Choosing the **optimal credit card** poses a significant challenge due to the constant introduction of numerous cards and their evolving policies and reward points systems.
- For newcomers entering the Indian Financial Space, they encounter an **overwhelming abundance** of credit card **options** to select from.
- Furthermore, obtaining **customer support** from many credit card providers often requires lengthy waiting times.
- Considering these challenges, the idea arose: "**Could this issue be addressed by leveraging AI when purchasing a credit card?**"



# Large costs to banks

- According to a source credit card companies in India incur an average cost of approximately **Rs 4300** for each credit card origination. These costs encompass customer acquisition expenses, such as offering freebies upon joining, managing risk, handling logistics, and paperwork.
- Additionally, many banks heavily invest in **affiliate networks**, allocating a budget of up to over Rs 1500 per conversion or Rs 325 per lead.
- Despite providing credit lending facilities, several banks still **lack** the ability to offer a **one-day turnaround or 24/7 support**, which is essential for assisting customers who utilize their services.

(Src - <https://www.gsninvest.com/post/weekend-irani-longform-the-future-of-credit-cards-in-india-part-2#:~:text=Cost%20of%20Origination%3A%20The%20credit> ),





# Current market and potential opportunities:

- The current market presents numerous opportunities in the financial sector, with the emergence of **multi-billion dollar companies** such as Credit Karma, **Cred**, NerdWallet, LendingTree, WalletHub, ePayLater, LendingCart, PolicyBazaar, BankBazaar, Card Insider, Card Maven, BillDesk, PayU, and many more fintech firms. These companies aim to address the **sluggishness** of the banking industry.
- Even content-focused companies like TheBalance Money, generating \$10.6 million in revenue, demonstrate substantial **profitability** by providing support services. Similarly, Indian pure-play content companies in the credit card space, such as Card Insider, generate revenues of over 3-4 crores annually. Basic advertising blogs like CreditCardz.in generate at least a couple of lakhs in revenue based on the same model.
- Furthermore, auxiliary calculator providers like Wishfin, offering tools for loans and EMIs, generate revenue **exceeding \$10 million** while delivering satisfactory services to their customers.
- However, the adoption of **new-age AI implementations**, particularly utilizing LLMs (Large Language Models), has yet to become widespread in traditional banking and even among newer fintech companies. Considering the potential, envision how much more valuable information and enriched experiences could be provided to consumers with the integration of more specific AI-driven solutions.



# Potential of LLMs

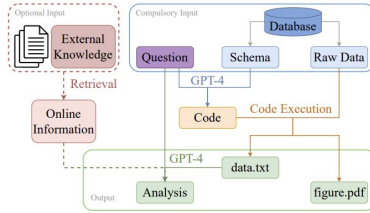
## Is GPT-4 a Good Data Analyst?

Liyang Cheng<sup>1</sup> Xingxuan Li<sup>\*1,2</sup> Lidong Bing<sup>1</sup>

<sup>1</sup>DAMO Academy, Alibaba Group <sup>2</sup>Nanyang Technological University, Singapore  
{liyang.cheng, xingxuan.li, l.bing}@alibaba-inc.com

### Abstract

As large language models (LLMs) have demonstrated their powerful capabilities in plenty of domains and tasks, including context understanding, code generation, language generation, data storytelling, etc., many data analysts may raise concerns if their jobs will be replaced by artificial intelligence (AI). This controversial topic has drawn great attention in public. However, we are still at a stage of diver-



: A figure showing the flow of our proposed

### Discovering Language Model Behaviors with Model-Written Evaluations

Ethan Perez, Sam Ringer, Kamille Lukošūitė, Karina Nguyen, Edwin Chen,<sup>1</sup> Scott Heiner,<sup>1</sup> Craig Pettit,<sup>1</sup> Catherine Olsson, Sandipan Kundu, Saurav Kadavath, Andy Jones, Anna Chen, Ben Mann, Brian Israel, Bryan Seethor, Cameron McKinnon, Christopher Olah, Da Yan, Daniela Amodei, Dario Amodei, Dawn Drain, Dustin Li, Eli Tran-Johnson, Guro Khundadze, Jackson Kernion, James Landis, Jamie Kerr, Jared Mueller, Jeeyoon Hyun, Joshua Landau, Kamal Ndousse, Landon Goldberg, Liane Lovitt, Martin Lucas, Michael Sellitto, Miranda Zhang, Neerav Kingsland, Nelson Elhage, Nicholas Joseph, Noemi Mercado, Nova DasSarma, Oliver Rausch, Robin Larson, Sam McCandlish, Scott Johnston, Shunta Kravec, Sheer El Showk, Tamera Lanham, Timothy Telleen-Lawton, Tom Brown, Tom Henighan, Tristan Hume, Yuntao Bai, Zac Hatfield-Dodds, Jack Clark, Samuel R. Bowman, Amanda Askell, Roger Grosse, Danny Hernandez, Deep Ganguli, Evan Hubinger,<sup>1</sup> Nicholas Schiefer, Jared Kaplan Anthropic, <sup>2</sup>Surge AI, <sup>3</sup>Machine Intelligence Research Institute ethan@anthropic.com

### Abstract

As language models (LMs) scale, they develop many novel behaviors, good and bad, exacerbating the need to evaluate how they behave. Prior work creates evaluations with *round-trip* (which is time-consuming and



### Interleaving Retrieval with Chain-of-Thought Reasoning for Knowledge-Intensive Multi-Step Questions

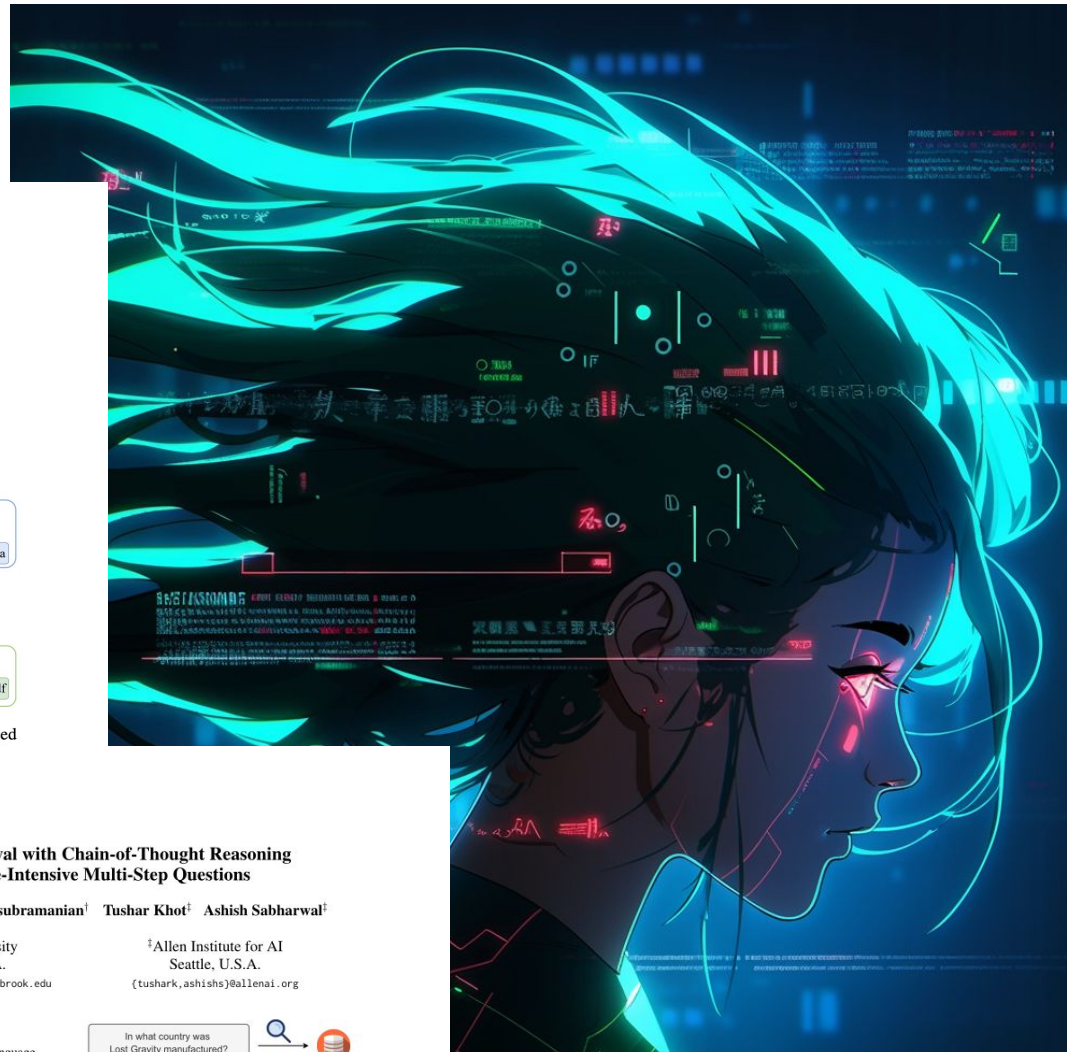
Harsh Trivedi<sup>1</sup> Niranjan Balasubramanian<sup>1</sup> Tushar Khot<sup>2</sup> Ashish Sabharwal<sup>1</sup>

<sup>1</sup>Stony Brook University  
Stony Brook, U.S.A.  
{hjtrivedi,niranjan}@cs.stonybrook.edu

<sup>2</sup>Allen Institute for AI  
Seattle, U.S.A.  
{tushark,ashish}@allenai.org

### Abstract

Recent work has shown that large language



# Our Solution

We propose a simple but novel approach which incorporates the LLM/ foundation model to analyze large chunks of regularly updated banking/Credit card information and then update its calculators.

At the same time we use a customer facing chatbot to help address customer queries from the recommendation of the best credit cards to basic FAQs and after sales customer support for credit cards.

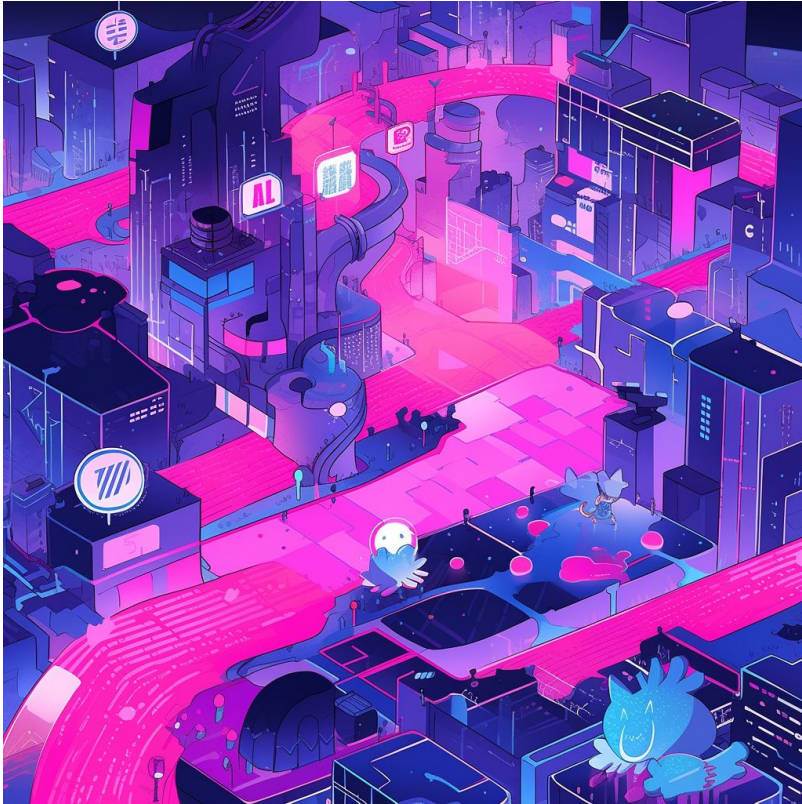
We eventually hope to be a strong bridge between banks that issue their cards and their customers by providing 24/7 customer service to credit card users and provide customer acquisition service for banks.

Our Aim is to make more happy customers and allow people to use credit cards and financial instruments easier





# Proposed Road Map and Implementation



Stage 1- Chatbot for recommending ( pilot testing and implementation - 1 month)

Stage 2- Making Calculators with the LLMs ( 1 month)

Stage 3- Integrating Customer support functionality by putting together all faqs, customer comments, complaints and talking to real banks and stakeholders ( 2.5 months)

Stage 4-Expanding to other financial sectors like insurance, investments, stocks, securities and more ( 3 months)

Stage 5- Register as a Robo Advisor , ( 2 months + paperwork)

Stage 6- Expansion to US and other countries

# Initial Designs

Some initial Quick designs on figma and creating a spreadsheet calculator



**WELCOME TO ARTHASATHI,  
YOUR INTELLIGENT CREDIT  
CARD ADVISOR! / CHATBOT**

GET STARTED NOW

Chat(expanded)

← Chat Tell me your goals, a dn spends and i will recommend to you the best credit cards , no ads i promise

Filter (Services Used)

- Services
- Transport
- Retail and ecommerce
- Movies and Dining
- Banks
- Interest Rates

 **CREDIT-BOT** (Designed only to compare Credit cards)

Thats Great I think, You should def go for the following cards :  
1. SBI International Just Card  
2. SBI International 8 card  
3. BBL Int platinum card

But before I Tell you more , Lets try to Figure out which exact card would suit you the best , the more information I have about your credit Card Purchases and how you might spend reward points, the better i can predict the utility that the card has to you

**YOU**

Oh nice , please tell mam more about the SBI International Just Card

Calculator

Selected Credit-Card

KIS	A	B	C	D	E	F	G	H
1	Now to calculate with a few assumptions per month and calculate the card return per month, all values are per month							
2	<b>Asses</b>							
3	<b>Part A Assumptions</b>		<b>Offers</b>	<b>Reasons</b>	<b>Calculation</b>	<b>Calculated amo savedto Calculator element</b>		
4	Monthly Spend on Credit	40,000	Credit card in India	Assuming avg spend on a credit card in India	40000	40000		Input number box for the monthly spends with no maximum value
5	Total Assumption for spends		Sum of Part A		40000			
6	<b>Part B Negative qualities</b>							
10	Joining fee	500+GST (18%)	divide value by 12 to get monthly benefits	(500*(1+0.18)/12	49.2			a fixed value per month for joining fee, with an input number box if the person wants to change the joining fee
11	Foreign Currency Markup	3.5% on transaction amount	Assuming 4000 rs on foreign transactions = 10 % of credit card spend	4000*3.5%	140			Input number box for Foreign Currency Markup in percentage
12	Interest rates	3.6% per month	Assuming late paid period of 1 month - repayment for corpus of month = 1% ; principal(40k)	(40,000*(1+0.036)^1 - 40k)	1440			Input number box for Interest Rates per month

ARTHASATHI

 LEARN THE LANGUAGE OF CREDIT



**CREDIT-BOT**

TELL ME YOUR GOALS, A DN SPENDS AND I WILL RECOMMEND TO YOU THE BEST CREDIT CARDS , NO ADS I PROMISE

Hi CreditBot 



Hi there !

Hey so I Spend most of money in international transactions, which card do you think would be the best for me.



Thats Great I think, You should def go for the following cards :

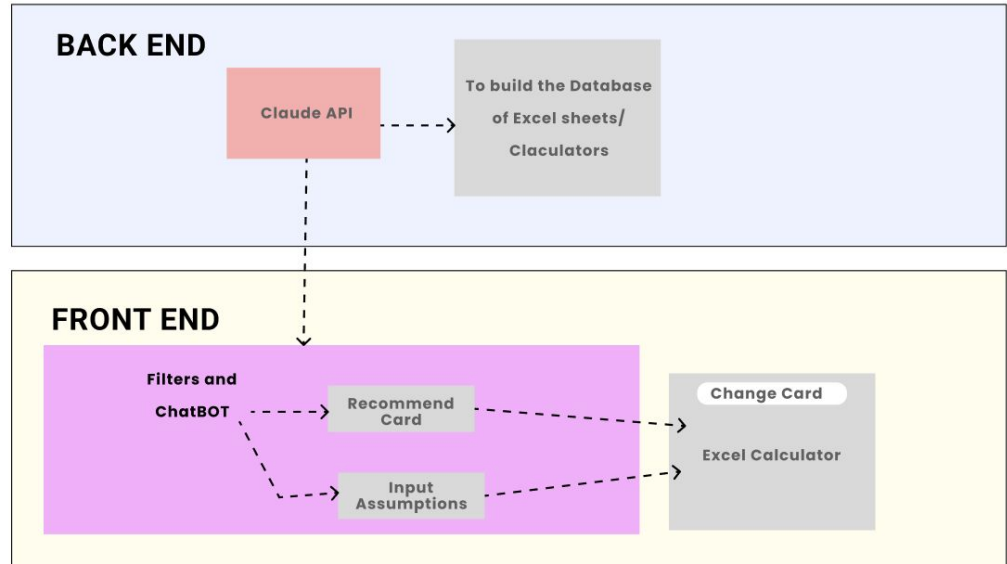
- SBI International Just Card
- SBI International 8 card
- BBL Int platinum card

But before I Tell you more , Lets try to Figure out which exact card would suit you the best , the more information I have about your credit Card Purchases and how you might spend reward points, the better i can predict the utility that the card has to you

# Technical functioning - stage 1 & 2

We planned to implement the whole app in stages , with Stage-1 currently only having the chatbot with the ability to recommend people.

We also have already started experimenting with stage 2 where try to get the foundation model to generate content that can be used to then can create a smart calculator in javascript.



Demo - only  
stage 1(  
currently)





# Business plan

Our business plan revolves around monetization strategies similar to successful fintech platforms like NerdWallet and PaisaBazaar.

1. We aim to assist individuals in applying for loans, credit cards, and other financial services, providing end-to-end support while earning a small percentage of the issuers' fees.
2. Additionally, we plan to leverage sponsored advertising for financial products as another revenue stream. By partnering with relevant advertisers, we can promote their offerings to our user base.
3. Furthermore, we intend to build efficient bridges that partially automate customer interactions for banks, offering a stronger service level agreement (SLA) with a response time of less than 24 hours. This automation, powered by our technology, will allow us to charge a fee for providing enhanced customer service and support.

There are many other ideas that we have for implementing and monetizing such a system.



# Potential future and Expansion/ roadmap

I plan to continue building up the app in the stages that were described before.

We also plan to add new features and pilot test the app.

If we get an opportunity will also try it in markets other than India .

For the next month will continue building the website and features to it slowly developing blog posts and then will be creating a marketing pipeline for July and will try to test the functioning of the app



# Team/ contact us / potential future work

(Me) Sanjay - Solo hacker in this hackathon,

- I have an MBA from MICA in Digital marketing and Communication, I have also worked at Deloitte as a consultant before and am a Mechanical Engineer ,
- Have hacked in multiple hackathons especially web3 , Eth Global and many more, recent Buildspace builder.
- I have tried to startup twice before ( electric motor company during engineering & Edtech app in University) . YC applied but yet in ( x3 ).
- Getting back into tech after 2 years of post graduate degree.
- Will be continuing building and experimenting with AI and more fintech in the coming months as i willing left a prod man job to build products XD !
- Linkedin - <https://www.linkedin.com/in/sanjayprasad-h-s-921a54ba/>
- Github - <https://github.com/sanjuhs>
- Email - [anoobonajourney@gmail.com](mailto:anoobonajourney@gmail.com) / [sanjuhs123@gmail.com](mailto:sanjuhs123@gmail.com)



PS another friend who would ideally be the tech founder acted as technical guide and help me sort out a few small errors i had.

End

