

Indaroma Internship Task Proposal

>Each segment has been divided according to the following structure , with a few changes if needed

1. (serial number)

>Introduction

>Pre task jobs to be completed

>Task 1 : Details , plan , programming / tools being used , time to be taken , timeline , money if any , additional questions / topics to be discussed , data requirements if any .

>Task 2 : Details , plan , programming / tools being used , time to be taken , timeline , money if any , additional questions / topics to be discussed , data requirements if any ...

>Time periods are the bare minimum I'll need to work with, they will exceed the given time based on what I do. 1 week involves ~20 hours of work.

>We can combine some of the tasks. For example, data gathering for one task can also serve as data gathering for another task. I've written it in its own column for you to understand better.

1. Data driven instagram profile

> **Introduction** : Has three parts : posting to social media networks , autoliker / autocommenting , the data science part .

> **Pre task jobs** : Define a social media plan . The best way I would start doing this is to open up an excel sheet , and decide how many posts each week , what kind of posts etc and draw up a schedule . Also decide who will be posting each post . See attached excel sheet (Check for social media plan sample . xlsx in folder) for a rough idea . We can customize this according to your needs , this is just to give you an idea .

>**Task 1**

> **Details** : This would help with posting across all social media networks at the same time .

> **Plan** : Decide with the social media plan and decide who will be responsible for gathering , posting content .

> **Programming / tools being used** : Plenty of options available on the internet . I have shortlisted buffer (<https://buffer.com/>) , Hootsuite (<https://hootsuite.com>) and IFTTT (www.ifttt.com) . I would personally recommend hootsuite . No programming needed , though setting up the account is needed . Sidenote : IFTTT does a pretty neat job with these conditional chain events . It's pretty neat . Might want to check it out !

> **Time taken** : Once we have a social media plan in place , 1 day max .

> **Money if any** : You can get a 30 day trial on hootsuite . After that , I'd recommend their professional plan @ 19\$/mo .

>additional questions / topics to be discussed : None

>data requirements if any : Login details

> Task 2

>Details : This is for autoliking / autocommenting on instagram posts .

>Plan : Before I mention the plan , a major issue with instagram . It keeps making frequent changes to its API , so bots have to be constantly updated to reflect the same . There are two workarounds for this : using bot services online and writing code . Code will take longer , but it will work for sure . Code will have to be changed everytime Instagram changes its API . Bots can be subscribed to , and if it doesn't work , you can always back out . I would recommend bots .

>Programming / tools being used : If code , python . If bots , I would first like to test out a few bots to see which of them work and which of them do not (Some of them are fake ... they charge money and don't do anything) . I'd like to set up dummy instagram profiles , test these bots out , and recommend the best one for you . Shortlisted ones at the moment : robolike , gramista , instazood .

>Time to be taken : Selecting more bots to test : 2 hours , setting up insta profiles : 3 hours , Monitoring data & deciding hashtags for each profile & dummy posting : 2 hr/day for a week , Reporting : 4 hrs

>timeline : Shortlist , create fake profiles , run accounts for a week to 10 days , report .

>Money if any : Most of them charge 7 to 20 \$ a month .

>additional questions / topics to be discussed : Programming / bots .

>data requirements if any : Login details

> Task 3

>Details : The data science part :

>Plan : I plan to work on the following : a) Identifying top photos for a particular hashtag (so you can post similar photos) b) Identifying major influencers for a hashtag by location (so you know whom to reach out to) c) Identifying sets of hashtags that work together (more likes for pictures) d) Identifying instagram profiles of other restaurants (see how active your competition is) e) Analyzing and reporting for content of other restaurants in order to replicate it (I'm okay with stealing)

>Programming / tools being used : Python , R , Tableau

>Time to be taken : This is more of a long term effort . The results for this will not be seen immediately . I will write the code so that it can be run multiple times without any issues . It is very early to say how much time this will take , but based on the number of hours you allow me to work / payment , we can talk about this .

>timeline : Data gathering , data analysis , data reporting .

>Money if any : None .

>additional questions / topics to be discussed : What would you like me to work on

to begin with . How many hours can I allocate for this .

>data requirements if any : None . All data to be gathered by me .

2. Guest analytics

>Details : Gather data about existing customer details from a) Social media sources b) restaurant location c) Catering client data

>Plan : a) Gather data from facebook , yelp etc about the users . Decide on what features to include . Since it is very likely that some users will not provide all details , what I would suggest is hiring 2-3 people to fill in those data fields for us (What they think the gender is , what the age is etc) . You do have programmatic approaches to these as well , where a machine does the job . b) Put a plan in place to gather data at the restaurant . c) Same for catering client data

>Programming / tools being used : Python , R , Excel

>Time to be taken : Understanding Fb , Instagram , Yelp API and gathering data : 1-2 weeks min , data feature assignment : 2-3 week , plan for data gathering at restaurant : < 1 week , catering client data : ? , reporting processes : 2 weeks .

>timeline : Gather data , assign features , plan data collection strategies , reporting mechanisms .

>Money if any : None .

>additional questions / topics to be discussed : Programmatic / people approach for social media site user attribute data ? . How and what attributes to be gathered for restaurant customers ? How is the catering client data organized ?

>data requirements if any : Restaurant data , catering client data

3. Menu analysis

>Pre task jobs : Gather list of restaurants that have to be evaluated .

>Details : a) Gather pricing data, unique dishes (signature dishes) , menu structuring , extra attributes (parking , credit card etc to understand if having certain features has a correlation with popularity) for surrounding restaurants . b) How has changing menu items / prices affected sales .

>Plan : Gather the data for data from the surrounding areas (VA - MD - DC) with a mix of yelp and going to restaurant websites . Do the same thing on a national level , but only for yelp . Gathering menus will be harder , might have to do some of it manually .

>Programming / tools being used : Python , Excel

>Time to be taken : For VA - DC - MD area data gathering : 2 weeks , national level data gathering : 2 to 3 weeks , reporting and visualizations : 2 weeks .

>timeline : Gather menus , gather attribute data , reporting

>Money if any : None

- >**additional questions / topics to be discussed** : changing menu items / prices affected sales - do we have data on this ?
- >**data requirements if any** : None

4. Customer targeting / Influencer analysis

- >**Details** : Gather data from facebook , instagram , Yelp . Determine a)importance of each user (based on number of followers etc) b) sentiment of comments of each user C) visually represent each network
- >**Plan** : Gather data , compile all data into single place , figure out sentiment , figure out importance , calculate score .
- >**Programming / tools being used** : Python , Excel , Gephi . I will try to write the code so that it can be run again and again and can accommodate additional data .
- >**Time to be taken** : Understanding Fb , Instagram , Yelp API and gathering data : 1-2 weeks min , Collating all data into single place and normalizing it : 1-1.5 weeks , calculating sentiment 1-2 weeks , assigning score and reporting : 1 week , Visualizing network : 1-1.5 weeks.
- >**timeline** : Gather data , normalize data , collect sentiment , assign score .
- >**Money if any** : None
- >**additional questions / topics to be discussed** : Details of catering clients ? Any other social networks to be considered ? Where do you want me to store the data , how ?
- >**data requirements if any** : Catering client data

5. Blog content analysis

- >**Pre task jobs** : Gather list of restaurants in a) DC VA MD area b) nationwide which have blogs .
- > **Details** : Collect information about blog posts to understand kind of blog posts that are being published .
- >**Plan** : Gather content , figure out attributes like word count , keywords , frequency to generate similar list of topics . Write blog posts on similar topics . Also optimize website SEO to include these words . The idea is not to do everything from scratch , but to use other APIs which can do this for me . But again , this is a long term thing as well .
- >**Programming / tools being used** : Python , Excel , Tableau
- >**Time to be taken** : List of restaurants : 1 week , Data gathering : 3 weeks , Analysis : 3 weeks
- >**timeline** : List of restaurants , data gathering , data analysis
- >**Money if any** : None . Maybe < 5 \$ if I exceed the allowed API calls .
- >**additional questions / topics to be discussed** : Talk about content generation
- >**data requirements if any** : None

6. Website activity tracking

>Details : This would depend a lot on if you're looking for an entire website redesign or just plugging in more functionality to the existing website . Unless you're really able to spare the time for a complete overhaul from scratch , I recommend that you stick with the existing website (with changes , of course ... all I'm saying is don't scratch from scratch) . a) For activity tracking (heatmap) , as we discussed , crazyegg . b) For activity tracking , another alternative(s) I found was heapanalytics, pendo , . They kind of do a lot of the work that you want to do , and you can automate things to a great degree . The only difference is that I won't be doing any of the scripting myself .
Advantages : Less code to write , start right away , easier to integrate . Cons : No custom solution , have to pay . You also have alternatives to these . These are the ones I found to be the best .

>Plan : Sign up , decide configuration details , start using these services

>Programming / tools being used : None .

>Time to be taken : ~1 week for configuration

>timeline : Sign up , decide configuration details , start using these services , automate reporting

>Money if any : Yes . Crazyegg - 9.99 \$ / mo . Heapanalytics free for 50k sessions / month, paid after that. Pendo is 9.99 \$ / mo .

>additional questions / topics to be discussed : If you plan to include a newsletter, the web analytics tools you'll be using will be different. Will you be doing a newsletter?

>data requirements if any : Web login details (wp admin).

> Additional info : For experimenting with UI , optimizely.com works well . Kissmetrics if campaigns tracking . Note to self : Check out clicktale , site looks boss .

ADDITIONAL IDEAS

1. Website backend

>Details : You're currently using Google sheets with a lot of JavaScript to view and load the data. This seems very inefficient to me. We can modify this two ways :a) continue using Google sheets to only store data, create a front end which allows you to create, read update, delete records right from a webpage. Would make it easier for you and others to enter, view data. B) load all the data in a SQL / postgresql database, and have a frontend which allows you to do whatever you want with it.

>Plan : Figure out what you need to have in your backend. This includes both for employees, clients. Create dB. Create frontend. Deploy dB and web app.

>Programming / tools being used : Python, SQL, postgresql.

>Time to be taken : Data understanding 1 week, SQL database 1 to 1.5 weeks, frontend 3 weeks, deployment 1 week

>timeline : Figure out what you need to have in your backend. This includes both for employees, clients. Create dB. Create frontend. Deploy dB and web app.

>Money if any : data storage I think around 10 \$ a month upper limit.

>additional questions / topics to be discussed How is the data organized? How is the client data organized?

>data requirements if any : yes. All the data you have.

2. Facebook automated reply bot

>Details : Would be nice to have a bot reply to Facebook messages in case you are not available to take a message.

>Plan : create a bot.

>Programming / tools being used : Facebook APIs, python. I'll be working off of existing tutorials.

>Time to be taken : 3 weeks.

>timeline : Haven't really thought this through in great detail. I guess it would involve the traditional software development cycle - requirements, development, iteration, testing, deployment.

>Money if any : none.

>additional questions / topics to be discussed : What would you like the bot to do?

>data requirements if any none.