Kalibrr BI Application Assessment - Ghilman Al Fatih

1. Question

With this data:
Recruiter Data:

- Location
- Job Level
- Employment Type
- Job Function
- Education
- Company Name
- Salary
- Responds Fast
- Shortlisted candidate data in each job

Jobseeker data:

- Check your kalibrr profile

With those data, explain what marketing activities that can you do to increase number of shortlisted (applicant accepted by recruiter) as your goal.

PS
The main task is to create a hypothesis/data model from sets of data we have in the platform. It will be an additional point if from that data model you can prepare/ suggest marketing campaigns/ activities Kalibrr can perform.

2. Goal

Increase number of shortlisted (applicant accepted by recruiter)

3. Finding General Problems and Root Cause

3.1. Background

Before deciding what marketing activities or campaign to do, I have to understand the problem on customer (applicant and recruiter). What is the general problem that blocked increase those metrics.

Why I do this? Because, it doesn't matter how good your marketing campaign or data model is if it's not tackling the right problems. It'll ended up as useless efforts and not giving significant impact to the goal metrics.

3.2. Before jump into the task / conclusion

What I do here is finding the right general problem and define the root cause which have the most effect to the goal metrics using continuously asking for why.

Generally, before jumping into conclusion on what the actual problem is, in the market, I need an analysis of additional marketing research data (qualitatively) and historical market performance data (quantitative) to jump from one branch of problem to the others. But I don't have it here, so I'll assume the general problem as the most mentioned problem (after describing each case by case)

For example, many problems can affect why jobseekers didn't apply for the job. Let's say there are three problems possible, and each problems has a possible "branch problems", each branch then have many possible sub-branch, then we have so many problems. Which is the root cause then (the core problems with higher effect that actually happening in the market). We need additional data to prove that.

3.3. Defining the right metrics to increase

Why we need to parse the metrics? It's because shortlisted candidate is controlled by many factors. By increasing this factors, we can assured that the goal metrics will be increased.

Why number of applicant accepted by recruiter is not increasing?
Mathematically speaking,
Shortlisted_Candidate = Conversion_Rate * Number_Of_Applicants

There are two factor there. We can achieve our goal by:
- Increasing Conversion Rate
- Increasing Number of Applicant

3.4. Increasing Number of Applicant

Why number of applicant is not increasing?
- Many jobseekers didn't apply for the job (No Use Cases)
  - Not open to opportunity [can't be approached]
  - No interest to job post
    - find job via search, but not interested and feel lazy to scroll find the others
    - the recommended job is not personalise enough
      - don't know which factor that jobseeker prioritise the most (from recruiter data) [**low hanging fruit**]

- They are qualified but feel underqualified to apply the job
  - The requirement from the company is too high [**can't be approached**]
  - Already confident and click apply, but feeling down because of the test before sending the application [**low hanging fruit**]
  - They don't know that they are qualified [**low hanging fruit**]

- Still haven't find the right job to apply (Compatibility)
  - Difficulty in finding suitable job criterion
    - Too many criterion on the jobseeker themself [**can't be approached**]
    - Difficulty in setting recruiter data to find the right job criterion [**low hanging fruit**]
    - Wrong keywords in searching the job

3.5. Increasing Conversion Rate

Why Conversion Rate is not increasing?
- Many applicant didn't compatible or qualified for the job
  - Many underqualified / uncompatible applicant apply for the job
    - Desperate for job, rushing candidate with brave mental [can't be approached]
    - Don't know that they are not qualified enough [**low hanging fruit**]
  - Many qualified / compatible jobseeker didn't apply for the job
    - Not interested in the job
      - the recommended job is not personalise enough
        - don't know which factor that jobseeker prioritise the most (from recruiter data) [**low hanging fruit**]
    - Doesn't realized the job is there
      - Difficulty in finding suitable job criterion
        - Difficulty in setting recruiter data to find the right job criterion [**low hanging fruit**]

- Still haven't find the right candidate to offer

- doesn't have jobseeker / candidate recommendations card? (I don't know this)
- does have recommendation but not personalise enough [**low hanging fruit**]
- candidate profile / CV didn't make a good impressions [**low hanging fruit**]
- Recruiter are confused (too many applicants, too much make them didn't read)
  - Too many unqualified applicants, making recruiters lazy, shading good applicant
    - Because we don't have a selection algorithm? [**low hanging fruit**]

3.6. Summarising it up

So from that, we have many possible root cause that can be persuaded (low hanging fruit)

From Increasing Applicant:
- No use cases:
  - Don't know which factor that jobseeker prioritise the most from recruiter data (personalisation)

- Underqualified Feeling:
  - Down because of the test before sending the application
  - They don't know that they are qualified

- Compatibility:
  - Difficulty in setting recruiter data to find the right job criterion

From Increasing Conversion Rate:
- Many applicant didn't compatible or qualified for the job
  - Unqualified doesn't know that they are not qualified enough
  - We don't know which factor that qualified jobseeker prioritise the most
  - Qualified jobseeker has difficulty in setting recruiter data to find the right job criterion

- Still haven't find the right candidate to offer
  - Does have recommendation but not personalised enough
  - Candidate profile / CV didn't make a good impressions

- Recruiter are confused (too many applicants, too much make them didn't read)
  - Too many unqualified applicants, making recruiters lazy, shading good applicant because we don't have a selection algorithm?

3.7. Problem Statement

Based on my statement before, the most problem stated we got is:
- Personalisation problem
  - **Personalisation / automation problem on jobseeker criterion / persona**
  - **Personalisation / automation on recruiter criterion / requirement**
- Not informed problem
  - **Candidate who qualified for the job don't know they are qualified, not encouraged**

- **Candidate who unqualified for the job don't know they are unqualified**
- **Candidate don't know that their profile is not good enough**

Again I stated, those problems need to be validated by qualitative and quantitative marketing data, but I don't have it, so just assume that problems is the root cause problem.

4. Proposed Marketing Activities / Solution

4.1. Inviting Qualified Candidate for the Job Opportunity

Objective
Increase number of application of qualified applicant to increase number of applicant and conversion rate

General Problem
Only a little of applicant is qualified hence recruiter only take small number of applicant who they feel is qualified

Root Cause
Jobseekers don't know that they are qualified, hence it lead to many qualified candidate ended up didn't apply for the job

Problem Statement
Qualified jobseeker didn't apply for the job because they don't know they are qualified.

Proposed Solution
Sending invitation email to apply for job opportunity to qualified jobseeker. This email contain statement from HR that invite jobseeker to apply because they are qualified. Qualified jobseeker is assessed from an calculation algorithm for "candidate score" based on jobseeker data and recruiter data compatibility.

I propose this parameter as a weight variable for those algorithm.
- Location: weight higher if distance smaller
- Job Level: the highest work experience duration the higher the weight
- Employment Type: based on historical user application
- Job Function: based on historical user application and search, work experience, and degree, the more match the highest the weight
- Education: higher the degree, higher the weight
- Company Name: based on historical user application and search
- Skills: If so many skills matched, the higher the weight

These parameter then added together respectively with each variable weight for the candidate weight. If it above a threshold, then we sent invitation to them automatically.

Business Hypothesis
Sending invitation email to qualified jobseeker will increase number of qualified candidate application

Metrics to Tracks
Primary Metrics: Number of qualified candidate application will increase
Secondary Metrics: % of qualified candidate who apply for the job / qualified candidate who got the email

Predicted Result
This campaign will be succeed if number of qualified candidate application increased by x %. We can validate that this increase is caused by this campaign with high % of candidate who apply vs candidate who got the email.

If those metrics increase, hopefully shortlisted candidate will increase, we can track the goal metrics to see if it give an impact or not.

4.2. Another Campaign

Actually I got a lot of idea on my mind, but due to the limited time, I can't give detailed explanation about it. So it's better to just write the idea and basic explanation.

1. **Informing unqualified jobseeker that they are not qualified before applying for the job.**

   We can do it by simply matching their data to recruiter data / criterion.

   For example, if total work experience duration of applicant (from jobseeker data) is below the recruiter requirements (from recruiter data), we can give an alert to them that they are not qualified on work experience duration. This can reduce unqualified applicant from flooding recruiter dashboard

   The sentence can be more polite, to prevent them resenting on us

2. **Informing jobseeker for better profile**
   This has many benefit. Increasing chance to be reviewed by recruiter and also increasing chance to make better standardised jobseeker data.
   For example, we want to make sure they fill work experience timeline, so we can calculate how many work experience they have. This also can give recruiter a good measure in their profile

3. **Personalisation on Job Recommendation**
   The algorithm is similar with the one I mentioned on 4.1. But we use this to improve job recommendation on the platform. We can also improve this algorithm with adding another clustering model on jobseekers based on their activities history on our app and then applied it in algorithm.

4. **Automatic Ranking of Qualified Candidate on Recruiter Dashboard**
   We already know how to rate qualified candidate with an algorithm. If we can apply this on recruiter dashboard to make sure unqualified one stayed in the bottom. Then hopefully it can improve conversion rate thus leading to increased shortlisted applicant.

   The idea is, qualified applicant stay on the top of recruiter dashboard. So recruiter doesn't have to scroll down too much on unqualified one.

That's all for me. Sorry for late submit.