**What Makes Data Scientists Resign?**

**3 aspects that make Data Scientists think about moving on to greener pastures**

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It’s no secret that attrition in general, and specially in ‘Data Science and Analytics’, is shooting through the roof recently. It has even led to the emergence of a new phrase **‘The Great Resignation’** — a phrase that could have hardly escaped you if you had been following any data science / analytics related conversations in the last couple of years.

Over the last decade, ‘Data Science and Analytics’ has been one of the fastest-growing industries with organisations understanding the power ‘data’ can unlock and are looking to leverage it to win over their customers. The industry leaders have been taken aback by the flurry of resignations one after the other and have come to realise the hard way that their treasured employees wanted something different.

Having worked in ‘Data Science and Analytics’ for 12+ years *(.. still continuing)*, I have had the opportunity to be witness to several formal/informal conversations with colleagues over the years on “*What makes a Data Scientist leave??*”

Below I am trying to summarise; thousands of spontaneous coffee chats, formal meeting room discussions, and candid cab ride debates; centred around the topic — into **THREE main factors which can cause even motivated data science professions to fall out of love of their current organisations and start looking out**.

A note to Data Science Leaders / Managers — Sort out the below three and you will see a significant reduction in Data Science and Analytics attrition.

*Please note that:*

* *I would refer to the entire ‘Data Science and Analytics’ domain, simply as ‘Data Science’.*
* *I am in no way implying that there cannot be other factors to employees leaving their organisation. However, I do feel that a lot of other reasons stated elsewhere can be a subset of one of these three themes.*
* *Before processing it must be understood that the below themes are equally applicable for all domains; however, in my view, they are more relevant for Data Science and Analytics.*

**1. The work.**

It is a no-brainer that if you do not like what you do or do not find it engaging enough, eventually you would get tired of doing it. And leave!

* By definition, **Data-Science is an intellectually challenging field.** The kind of people in Data Science jobs are engineers, statisticians, and mathematicians — that is, folks who have been intellectually inclined for most of their life so far. Hence, these people have high expectations from their work — ***it must challenge them, it must make them explore new things, implement them and make an impact.***  
  Data Scientists are scholarly beings who often have the need to connect with the work they do. They want the work we do to be intellectually challenging. This is an important aspect of ‘engaging work’.  
  In a conversation, someone very candidly told me that “*the HR person sold me a great role wherein I would do a lot of AI and Machine learning work but ended up doing business reporting after joining. I did not do a Ph.D. to be doing this kind of work.”* Obviously, he/she left very soon.
* **One more aspect of ‘engaging work’ is the ‘impact’ or the ‘perceived impact’ data science brings to the business.** Often data scientists get withdrawn when they see that the organisation is treating data science work as a good-to-have side-of-the-desk study rather than a project that will determine the next business strategy.   
  →It is important for the leadership to make the data science team feel valued in the sense that their work is helping drive the business forward.
* **Another aspect of ‘engaging work’ is the learning that comes along with it.** Learning can also be thought of as the encouragement to attend training, do self-learning, and eventually have the option of applying it in real projects. ‘Learning opportunities’ is something that keeps data scientists engaged and lack of these often results in monotony, a sense of satisfaction, and eventually withdrawal.   
  →When data scientists feel their learning curve has plateaued they often start looking out.
* The work must provide the opportunity and **freedom to fail and learn**. Data Scientists want to have the freedom to try out new things, even if it leads to failure. This ‘freedom to test and learn’ is prevalent in organisations that have attrition rates on the lower end.

**A note to Data Science Leaders / Managers:**Give Data Scientists exciting work which can be impactful if done right, keep it changing every now and then to break monotony, focus on their training needs and give them the freedom to fail!

**2. The people.**

The people you work with are your work-family. Your work-life is one-thirds of your life; so, you do spend a considerable amount of time with your work-family. Better spend it happily!

Team-work is generally important in most domains but especially in Data Science and Analytics. **This domain requires a lot of collaboration between individuals from the same team or across other teams.** Data Scientists thrive on knowledge sharing with others and to make an impact with their projects often need to bring a lot of other stakeholders on board. They need to do knowledge-sharing sessions, peer reviews, and meeting with clients — *there is no escaping work and non-work-related interactions with colleagues.*

I break the work-family into three concentric circles:

**2.1 The manager / team lead:**

There have been studies wherein the single most important factor for employees leaving is their manager *(please see the below article)*.

* Managers which like to *micro-manage, do not trust their employees enough and do not care about them as individuals* — often have disengaged teams.
* Managers who *do not recognise / appreciate dedicated hard work and provide growth and development opportunities* tend to see a high attrition issue in their teams.
* Managers who *do not communicate to provide actionable feedback throughout the year* but rather just come around performance review cycles to focus on negatives.

→ Please note that it is more relevant in a ‘Data Science and Analytics’ profile as the work is seldom well-defined evolving continuously, requires collaboration and regular stakeholder management. Data Science Managers can make or break the working environment within a data science team.

.. The below article rightly states that: “**Employees leave their managers, not companies**”.

**2.2 The inner-layer:**

This comprises your immediate team; that is, the people you work/interact with on a day-to-day basis. They are the core of your work-family. You brainstorm ideas with them, share your work, observe their work, exchange knowledge, give feedback, get feedback, joke around with them, eat, drink, go out — ***There is no escaping them!***  
→It is imperative to have a **respectful and cordial relationship** with the inner layer of work colleagues.

It is very important to work together and not against one another.

In situations when you do not get along with your immediate work colleagues, you or they get overly competitive, and often focus on each other’s shortcomings — survival becomes difficult.

**2.3 The outer layer:**

This group comprises of the organisation’s leadership.

* They are responsible for **developing and maintaining a positive work culture**. They must ensure that workplace bullying, or cliquey behaviours, are carefully monitored and dealt with in time.
* Organisation’s leadership is **responsible for developing and maintaining a collaborative and healthy work environment** with team-building activities, socialising, fostering a considerate and respectful atmosphere — all essential for worker happiness and retention.
* Also, leadership is responsible for **setting the vision and mission of the company and ensuring that all teams and individuals connect to it.**
* The organisation’s leadership must be **reachable enough, transparent enough, and frequently communicate** with employees.  
  *Communication must not be through cold emails or matter-of-fact news letters but via the good-old face-to-face emotive interactions.*

→if you cannot trust the leaders of your organisation — this can be very demotivated for an individual and can result in them being disengaged with the work.. *And we all know where that leads.*

**A note to Data Science Leaders / Managers:**Focus on building a transparent, positive, healthy, open, collaborative Data Science culture within your organisation with data scientists feeling connecting to the overall vision/mission collectively!

**3. The rewards.**

It does not take a genius to understand that if one does not feel rewarded enough for a piece of work, you would want to leave that piece of work.

* Data Scientists, know that the unique overlap of technical expertise, soft skills, and business acumen they possess; is not easy to find. They also know that in the last decade more and more organisations are trying to unlock the value of ‘data’ and hence, the demand for Data-Science / Analytics is increasing more than ever before.  
  → **Data Science is an in-demand and tough-to-replace skill set.** Due to the boom, the Data Science salaries are increasing andin cases when data scientists are not compensated in line with the work they are doing or in line with the market; they are quick to venture out.
* “Rewards” can also be thought of as an **opportunity to grow professionally**. Data Scientists love to stay on when they can sense their organisation has the appetite and scope to grow them into senior roles. In some organisations, it is a must to take on a management role to rise up the ranks while in others there are individual contributor (IC) roles wherein one can grow to a fairly senior level without the compulsion of taking up management.  
  → As you can guess, **organisations that have a well-defined IC path have lower attrition than organisations that make it compulsory to take up management to rise up the corporate ladder.**

**A note to Data Science Leaders / Managers:**Fair Compensation and opportunities to grow are a must-have. If business needs are different at this time — be open and transparent and acknowledge gaps!

**Summary**

‘Attrition’ has turned out to be a huge problem for all domains in the past couple of years and “Data Science and Analytics” is no exception. While some aspects are outside the control of Data Science leaders within an organisation; there are a lot of aspects that can be controlled and tuned to improve the health of data scientists and stop them from leaving.

The three aspects that any Data Science professional care for in any job are:

* **The work.**  
  *- Is it challenging? Engaging? Repetitive?  
  - Do I have the freedom to Fail?  
  - Do I make an Impact?*
* **The people.**  
  - Immediate manager: *Is Micro-managing? Gives Independence? provides actionable feedback?*  
  - Colleagues: *Helpful and collaborative? Are they Over-competitive?*   
  - Leadership: *Trustworthy? Communication? Recognises good work?*
* **The rewards.**  
  *- Compensation? Perks?  
  - Future Growth? Freedom to choose IC vs. management path?*

→ If any of the above three themes become a concern, it raises a “Red Flag” in any employee’s mind.

→ If any two of the above three themes become a concern, then I believe it is very likely they are already looking out to move onto greener pastures.

*.. It is important to note that most of what we have talked about above is* ***solvable****!*