DS/AI

Self-Starter Handbook

BUILD YOUR OWN ROADMAP

Ankit Rathi

From a time around when DS/AI field started picking up, every other day I get at least 8–10 messages from DS/AI starters & enthusiasts on ‘How can I get into DS/AI field?’. Over a while, I have improvised my response based on the follow-up questions they ask like:

1. What is the difference between DS, ML, DL, AI, DM?

2. What are the roles in DS/AI, who does what?

3. What concepts, processes & tools they need to learn?

4. Which books, courses, etc they need to refer to?

5. How to build a DS/AI portfolio?

6. How to write a resume for DS/AI?

7. How to build a helpful network?

8. How to search for the job?

9. How to prepare for the interview?

10. How to stay up to date in this still-evolving field?

You can notice that these questions are not conceptual ones and there is no dedicated material to address these roadblocks. I thought why not to build a framework or a road-map for DS/AI starters and enthusiasts so that I need not to answer the same type of questions again and again. And that is when I started documenting what a starter or enthusiast need to do step by step in order to reach a level when he is ready to tackle any challenge thrown to him. My answer to the above questions in a structured way to help DS/AI starters & enthusiasts is this book. This book covers the framework to launch your DS/AI career in 8 chapters.

Ankit Rathi provides unique combination of Data Engineering (DB/ETL/DWH/BI)/Architecture (Data Management & Governance) & Data Science (ML/DL/AI) with more than a decade of demonstrated history of working in IT industry using Data & Analytics. His interest lies primarily in building end to end DS/AI applications/products following best practices of Data Engineering and Architecture.

In his free time, he blogs about various topics on DS/AI field & tries to simplify it for starters & enthusiasts.

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Rs 499/-

ISBN 978-1-64587-432-4

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Build Your Own Roadmap

Ankit Rathi

To my wife, Divya, who's always accepted me the way I am and supported my hustle, drive & ambition.

To my children, Aarsh & Driti, who are the reason to wake up every morning and work as hard as I can.

DS/AI Self-Starter handbook is a great resource for aspirants starting in the space of Data Science. It covers approach and useful resources that can help in your learning journey and written by one who himself is an Data Science practitioner. I recommend this to anyone who are aspiring to get into Data Science and are looking for insights on how and where to get started.

Srivatsan Srinivasan
Chief Data Scientist (Cognizant)

Wow, this is very impressive! It has taken some time to review, but WOW!
I should have had you as a co-author next time!!!

T. Scott Clendaniel
Chief Data Scientist (Legg Mason)

To be great data scientist you should emphasis on skillset and mindset. Where a lot of book that give you skill set, this is the first book I read that dedicating to shape data scientist mindset.

Nabih Ibrahim Bawazir
Data Science Head (Datanest)

Extremely laudable & heroic attempt to put all your thoughts and experience together to help people.

Sumit Pal
Big Data Architect (Qcentive)

Ankit has done a great job summarizing what is possibly one of the toughest and most frequently asked questions, "How to get started with data science?". Packed with information, this book will definitely be helpful for people from both academia and industry looking to get started on their own Data Science and AI journey.

Dipanjan Sarkar
Data Scientist (Rad Hat)

I think it is a brilliant book for starting Career in Data Science as New Entrants to Data Science often deviate from Path to reach End Goal and this Book tries to solve that Problem in a easy way. I would really like to Congratulate Ankit for Providing Data Science Career Steps in this useful manner.

Yatin Bhatia
Data Scientist (RxLogix)

An indispensable guide and a valuable resource for anyone seeking to enter the field of Data Science. Replete with great advice directly from the author's personal experience.

Parul Pandey
Data Science Evangelist (H2O.ai)

This book kicks you into the right direction definitely worth reading for the beginners trying to break into DS/AI.

Avik Jain
Machine Learning Intern (EMA Solutions)

If you are one among people struggling to identify the right book for data science, this book would probably help to understand where to start, how to prepare, how to develop the habit of continuous learning.

Vishnu Durgha Prasaad
Data Science Practitioner

About the Author

Ankit Rathi is currently working as a Lead Architect-DS/AI at SITA aero. He is a Data Science (ML/DL/AI) practitioner with more than a decade of demonstrated history of working in IT industry using Data & Analytics. His interest lies primarily in the theory & application of artificial intelligence, particularly in developing business applications for machine learning and deep learning. Ankit's work at SITA aero has revolved around designing FlightPredictor product & building the CoE capability. During his tenure as a Principal Consultant at Genpact HCM, Ankit architected and deployed machine learning pipelines for various clients across different industries like Insurance, F&A. He was previously a Tech Lead at RBS IDC where he designed and developed various data intensive applications in AML & Mortgages area. Ankit is a well-known author for various publications (Towards Data Science, Analytics Vidhya etc) on Medium where he actively contributes by writing blog-posts on concepts & latest trends in Data Science. His blog-series on 'Probability & Statistics for Data Science' has been well received by Data Science community in 2018. He is followed by around 30K data science practitioners & enthusiasts on LinkedIn.

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Making Career Future-Proof

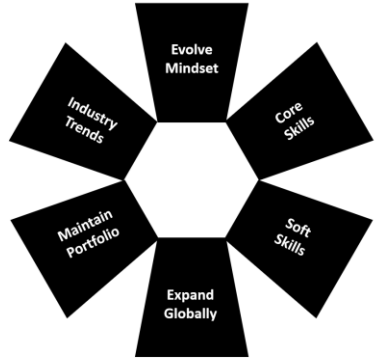
This chapter talks about how you can make you DS/AI career future proof. Lets first understand, why this is required? So what exactly does it mean to future proof your career?

Future proofing your career is simply taking the extra steps to prepare yourself for constant

technology disruption, one that's going to rely heavily on adaptability.

So rather than waiting for someone or technology to replace your labour, you'll take a proactive approach to put yourself in a position where potential employers can't afford to work with you.

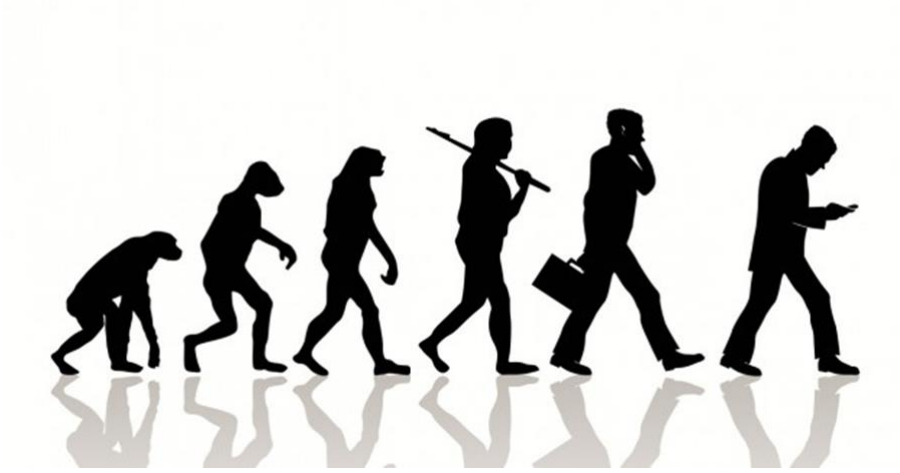
Follow these six steps and you will secure your place in the workforce alongside disruption in technology instead of getting edged out:



Making Career Future-Proof

DS/AI: Self-Starter Kit

7.1 Build ‘Evolve’ Mindset



Technology is only going to keep evolving, and it’s always going to get better. While you and I may not know exactly how we do know this change is inevitable. So as technology in the work environment evolves, so should the workforce.

People who are more adaptable and resilient will be the ones who will make the cut. They will also be the employees who are not threatened by technology disruption.

But how to become more resilient and adaptable?

First, you can prepare for the future like you are doing today and be ready to change course at a short notice. And two, when your environment begins changing, have an open mind about what this transition may bring — and be ready to take it head-on — instead of resisting it and sticking to your old habits.

One of the best ways to build the confidence necessary for this new technology-driven world is to level-up your digital skill-set.

7.2 Hone Core Skills

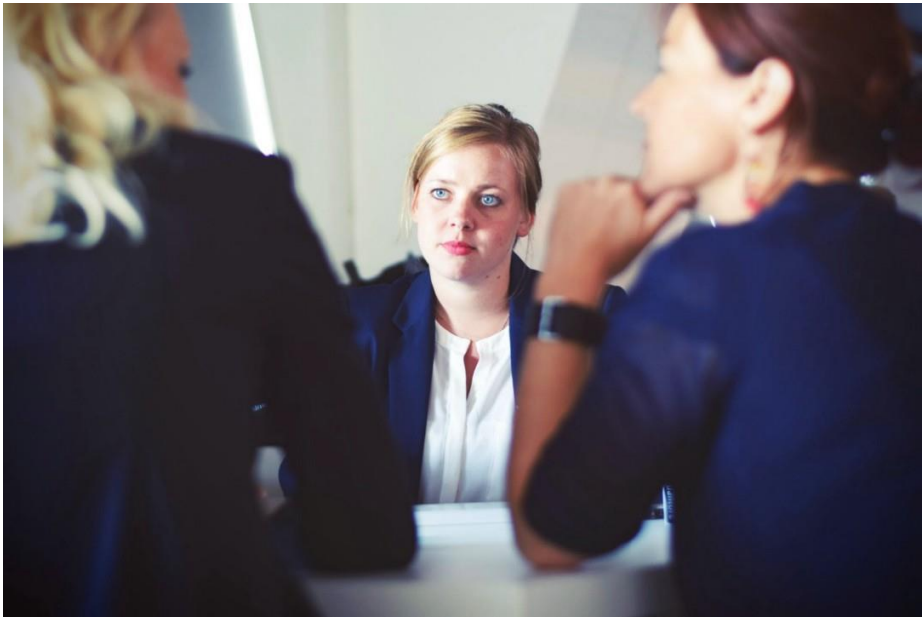
The technology disruption will also create a need for higher skill levels. You may have already witnessed the fact that having a college degree doesn't make you stand out anymore. In fact, it is going to get redundant in the near future.

Organizations are emphasizing more on the core skills to do the job, the trick is to never stop learning and keep honing your core skills.

You should continue to acquire new relevant skills as well— especially ones which will be in demand.

The best way professionals can do this is by enrolling in online courses or you can also learn on your own. Like degrees, don't focus on collecting training certificates but try to gain hands-on learning as much as you can.

7.3 Develop Soft Skills



You may be able to train a robot to automate the technical skills of your job, but soft skills such as leadership, communication, collaboration, and time management are still tasks only humans do well.

Since technology is not at the point where robots have the same emotional intelligence as humans, these soft skills are and will continue to be in high-demand.

The key is to consciously try to improve on your soft-skills. Fortunately, you can also hone your soft skills with online classes so you can be more proactive in this department too.

7.4 Maintain Digital Portfolio

In one of the lessons earlier, we learnt how to build our portfolio. Most people wait until they are ready to find a new job to update the portfolio. But this is a huge mistake since you may forget what you've been up to, or worse, forget to mention a major milestone or achievement.

A better approach is to always update your projects and accomplishments as you work through them.

This guarantees that you never forget to highlight something and you'll always have a list of your achievements on hand.

It is also a great idea to keep your performance reviews here, both the good ones and the bad. You can always refer back to these anytime you need a pick-me-up or if you want to narrow down your specific areas needing improvement.

7.5 Expand Network Globally

Couple the evolution of technology with the rise in telecommuting, remote work, and networking sites like LinkedIn, and you will quickly find connections outside of your local network.

To stay in touch with these global members of your team, you will want to become a pro at virtual project management tools like Trello and messaging platforms like Slack.

Apart from your team members, become more familiar with the geographic regions that pertain to your job by reaching out to professionals in those countries too.

If you get an opportunity to relocate or take on an international project, go for it and give you a leg up on your competition, it will go a long way to future-proofing your career too.

7.6 Monitor Industry Trends

Understanding the future of your industry is a giant factor in how well you can truly future proof your career. Essentially, there's no point specializing in a language/tools that may be completely redundant in a few years.

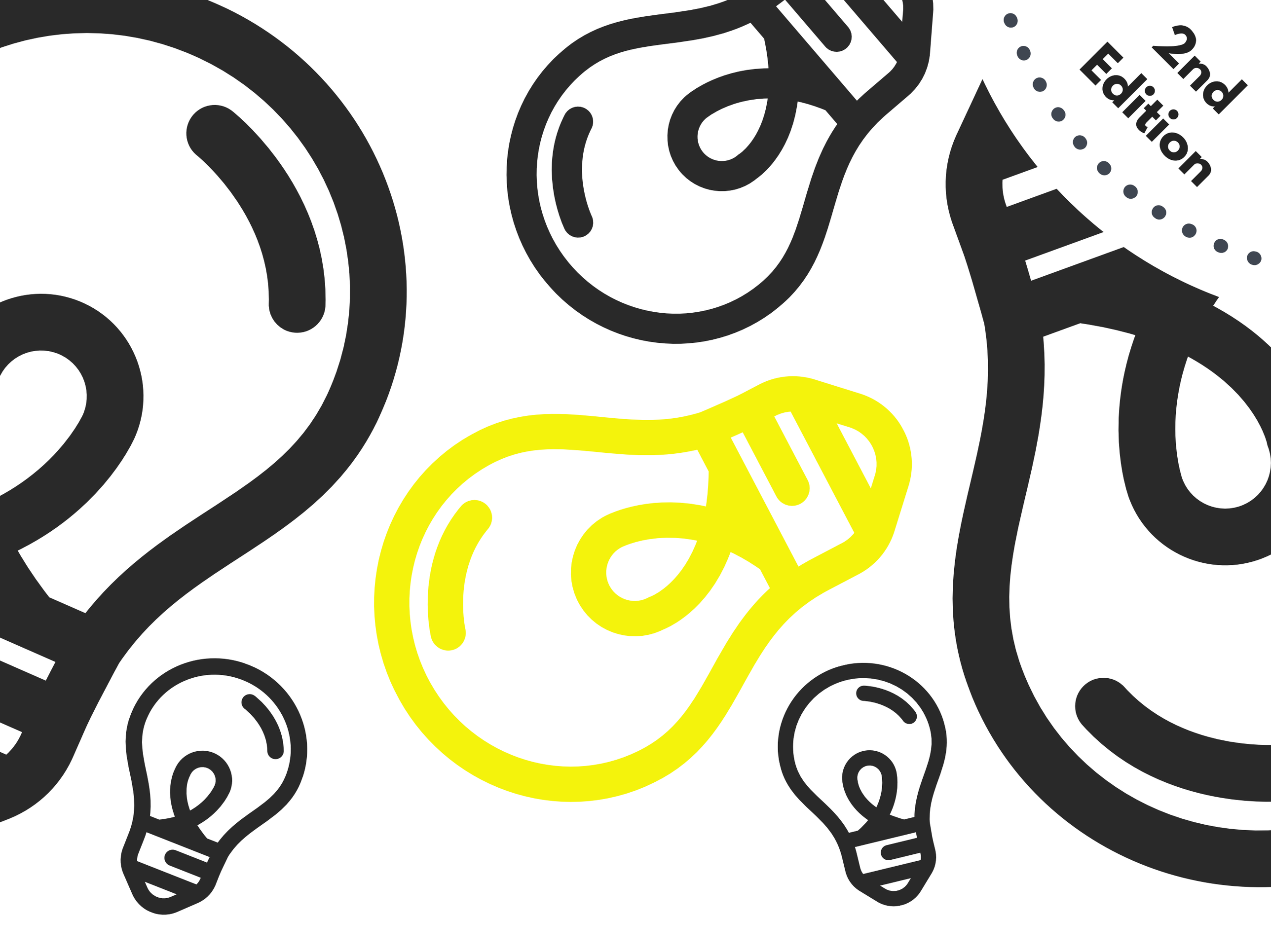
The tasks most at risk are those requiring low-level repetitive tasks each day. So if that description matches your current position, it is time to add more skills to the fore and prepare for the redundancy in future.

But remember, an increased use of technology in the workplace doesn't always mean your job is at risk.

Rather, it could mean you will just need to know how to use upcoming technology/framework as a way to potentially do your job better or more efficiently.

Stay abreast with industry news to see if it impacts only specific to your company or your entire industry as a whole. If you see an industry-wide trend, that's a good sign you should learn those new skills and consider switching career paths.

Either way, follow these steps and you'll ensure your career — both now and in the future — is set up for success, even as technology disruption and automation move in.



Artificial Intelligence

Self-Starter Handbook

BUILD YOUR OWN ROADMAP

Ankit Rathi

Coming Soon… 2nd Edition

with revised content & 3 more chapters…

ankitrathi.com

From a time around when AI field started picking up, every other day I get many questions from AI starters & enthusiasts on ‘How can I get into AI field?’. Over a while, I have improvised my response based on the follow-up questions they ask like:

- What is AI and why is it important?
- What is the difference between AI, ML, DL, DS, DM, BI?
- What an end-to-end AI project looks like?
- What are the roles in AI projects, who does what?
- What AI concepts & tools you need to learn?
- Which books, courses, channels etc you need to refer to?
- How to practice & build an AI portfolio?
- How to write a resume for an AI role?
- How to build a helpful network?
- How to search for the job?
- How to prepare for the interview?
- How to switch into an AI role (inside or outside)?
- How to lead an AI initiative in your organization?
- How to stay up-to-date in this ever-evolving field?

You can notice that these questions are not conceptual ones and there is no dedicated material to address these roadblocks. I thought why not to build a framework or a road-map for AI starters and enthusiasts so that I need not answer the same type of questions again and again. And that is when I started documenting what a starter or enthusiast need to do step by step in order to reach a level when he is ready to tackle any challenge thrown to him. My answer to the above questions in a structured way to help AI starters & enthusiasts is this book. This book covers the framework to launch your AI career in 11 chapters.

Ankit Rathi is a data & AI architect, published author & well-known speaker. His interest lies primarily in building end to end AI applications/products following best practices of Data Engineering and Architecture.

In his free time, he blogs about various topics on Data & AI field & tries to simplify it for starters & enthusiasts.

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₹ 499 | $ 9.99 | € 8.99

ISBN 978-1-64587-432-4