



DS/AI Self-Starter Handbook

BUILD YOUR OWN ROADMAP

Ankit Rathi



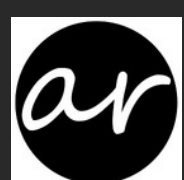
From a time around when DS/AI field started picking up, every other day I get at least 8–10 messages from DS/AI starters & enthusiasts on ‘How can I get into DS/AI field?’. Over a while, I have improvised my response based on the follow-up questions they ask like:

1. What is the difference between DS, ML, DL, AI, DM?
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5. How to build a DS/AI portfolio?
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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.



DS/AI Self-Starter Handbook

Build Your Own Roadmap

Ankit Rath



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.

U0.1: Webpage: <https://www.ankitrathi.com/>

Table of Contents

- About the Author..... 9
- Preface 13
- 1 Understanding the Big Picture 19
 - 1.1 Navigating the landscape22
 - 1.2 Working on building blocks23
 - 1.3 Utilizing the resources24
 - 1.4 Building your portfolio.....25
 - 1.5 Networking & landing the job25
 - 1.6 Making Career Future-Proof.....26
 - 1.7 Putting it all together.....27
- 2 Navigating the Landscape 31
 - 2.1 Multi-disciplinary field.....33
 - 2.2 Various Terminologies35
 - 2.3 Interconnection.....37
 - 2.4 DS/AI Roles.....38
 - 2.5 Academics Vs Industry41
- 3 Working on Building Blocks 47
 - 3.1 Concepts to Learn49
 - 3.2 Process to Follow54
 - 3.3 Tools to Master57
- 4 Utilizing the Resources 61
 - 4.1 Books to refer.....63

4.2 Courses to Attend	67
4.3 Blogs to follow	70
4.4 Podcasts to listen	74
4.5 YouTube Channels	77
5 Building your Portfolio	87
5.1 Work on Public data-sets.....	88
5.2 Participate in Hackathons.....	95
5.3 Publish on Git-hub	99
5.4 Write a Blog.....	101
6 Networking & Landing the Job	105
6.1 Network on LinkedIn	106
6.2 Prepare the CV	110
6.4 Crack the interview.....	116
7 Making Career Future-Proof	121
7.1 Build 'Evolve' Mindset	123
7.2 Hone Core Skills	124
7.3 Develop Soft Skills.....	125
7.4 Maintain Digital Portfolio	126
7.5 Expand Network Globally	127
7.6 Monitor Industry Trends	128
8 Putting It All Together	131
8.1 Avoid Being a Junkie	133
8.2 Learn to Solve.....	135
8.3 Just Enough Approach	137
8.4 Conclusion	138

Preface

It is probably not a secret that data science/artificial intelligence (DS/AI) has become one of the most exciting fields of this age. Although it may seem the buzzword of our time, it is certainly not the hype. This exciting field opens the way to new possibilities and is becoming indispensable to our daily lives.

Organizations, big or small, are heavily investing in DS/AI research and applications these days. And hence, it has become the hottest career. If you want to become a DS/AI practitioner, there is no better time than this.

Aspirants are taking different approaches to get into the field, some are fortunate enough to be put into projects as freshers, but most aspirants are building their capabilities by learning theory and applying them on public data-sets.

While there is no dearth of free & paid material, too much of information has only confused the current crop of DS/AI aspirants.

Based on the questions that I am asked by them on day to day basis, I can see how perplexed they are. Not to say, taking advantage of the situation, most of the training institutes are minting money like anything, bundling even non-relevant courses as well in data science ones.

Why this book?

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:

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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.

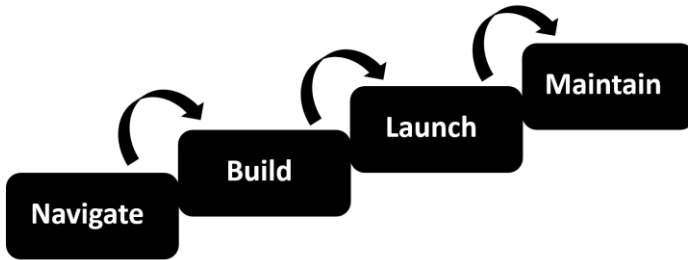
My answer to the above questions in a structured way to help DS/AI starters & enthusiasts is this book.

What this book covers?

This book covers the framework to launch your DS/AI career in 8 chapters. Lets learn about the framework first:

DS/AI field is not a rocket science, still you can relate launching your career with launching a satellite.

On an abstract level, it looks fairly simple, overall process can be divided into four logical phases: Navigate, Build, Launch & Maintain.



DS/AI: Self-Starter Kit

Build Your Own Roadmap

Chapter 1 covers the Big Picture of this book, the phases in above framework is discussed in more detail.

Navigate (Chapter 2) is the very first phase of your DS/AI journey, where you need to understand the overall landscape before diving deep. This step covers Q1 & Q2 from previous section.

Build (Chapter 3 & 4) phase covers all the concepts, processes, tools you need to learn and the resources you need to refer to gain required knowledge. This step responses Q3 & Q4 from previous section.

Launch (Chapter 5 & 6) is the phase where you build your portfolio, network with like-minded professionals and start looking for job. This step elaborates from Q5 to Q9 from previous section.

Maintain (Chapter 7) phase details out how you can stay up to date in this ever-evolving field. This step answers Q10 from previous section.

Chapter 8 covers puts all that we have learnt in this book together, details out 3 more roadblocks in your DS/AI journey and how to tackle them.

Who this book is for?

This book can be useful for a variety of readers, but I wrote it with two main target audiences in mind. One of these target audiences is university students learning about DS/AI field, including those who are starting a career in data science and artificial intelligence. The other target audience is professionals working in other fields, who do not have a data science, statistics or programming background but want to rapidly acquire one and expand their career.

There is no assumption or prerequisites for a reader to cover before reading this book.

Looks interesting? Let's start with your journey in DS/AI field. But before that I would like to highlight one thing.

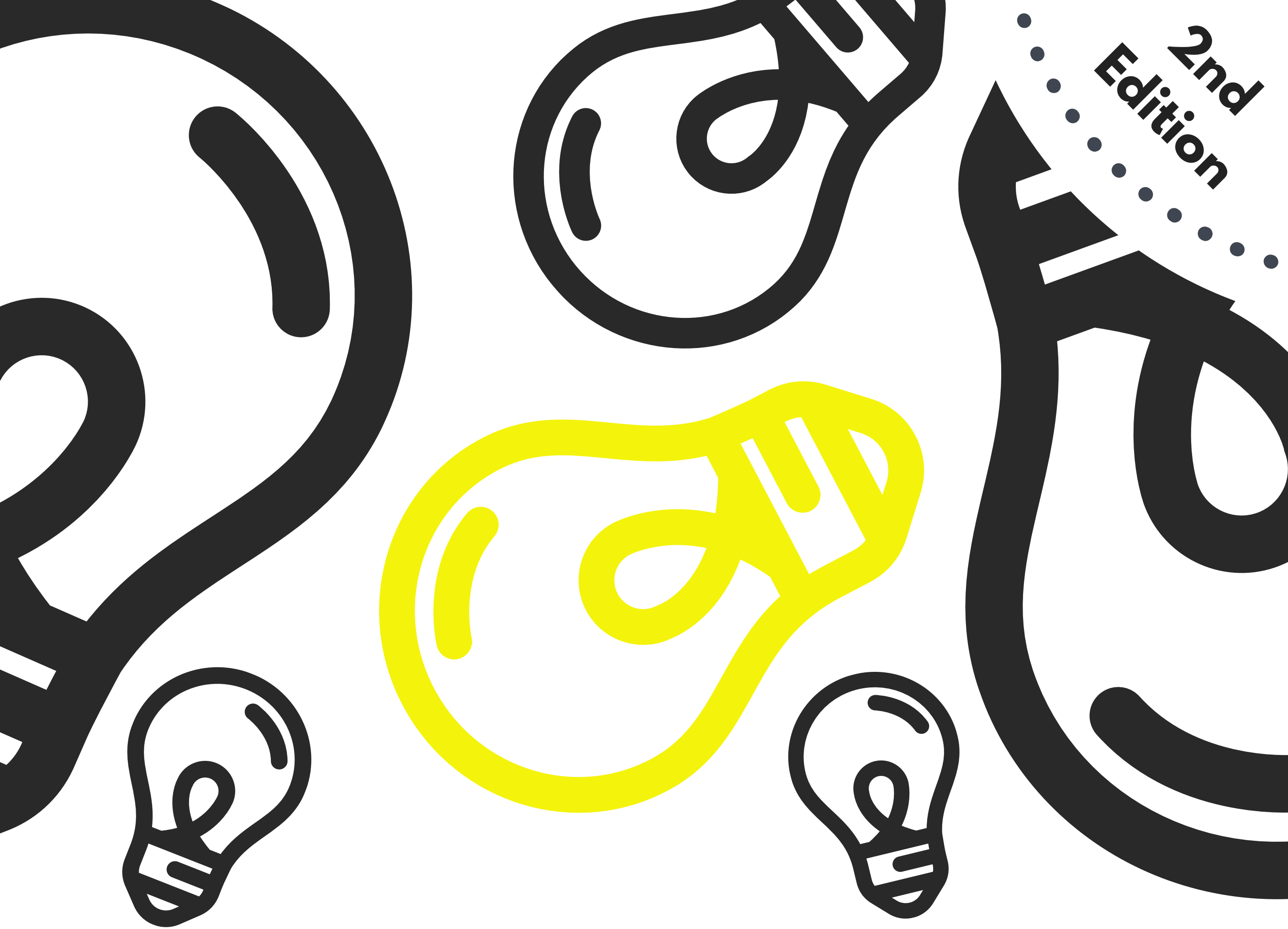
Please note that this book does not cover Data Science & Artificial Intelligence concepts.

Consider it as a personal coach to launch your career in DS/AI field who gives you enough exposure to the field so that you can yourself prepare a roadmap of your DS/AI journey.

There is a GitHub companion notebook for this book where you can find addendum & latest updates.

U0.2: GitHub Companion Notebook: <https://github.com/ankitrathi169/Self-Starter-Handbook>

2nd
Edition



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.

