A BADASS'S GUIDE TO BREAKING INTO DATA

A BRIEF GUIDE ON BREAKING INTO THE DATA PROFESSIONS

by Lillian Pierson

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INTRODUCTION

This brief guide details the story of what I did to create a new business for myself in the data professions in just 479 days. The purpose of this guide, however, is to serve as a use case for other aspiring data professionals. It explains exactly what needs to be done to build the skills, content, and community that data professionals need to begin earning a full-time income in just 16 months – all while getting to follow their passion of working with data.

Ironically, it was just a few weeks ago that I looked around and realized that I am indeed a tech entrepreneur. I've hired support staff and formed industry partnerships. My business has systems in place, legal counsel, the whole nine yards. To outsiders the fact of me being an entrepreneur may have seemed obvious, but I never really thought of myself that way. I've just been doing what I love, and the business grew up around me organically as a natural by-product of that.

This said, it's been since 2012 that I've been working solo in the field. It's not exactly like the business sprouted up on its own overnight. To the contrary, it arose out of my daily and consistent efforts. For me, it took exactly 479 days of consistent work to get my brand going enough for me to quit my day job. That happened back in 2013.

To be honest, my intention was always to find a way to work online. I wanted that so I could have the freedom to work from anywhere in the world. It was Christmas day 2011, in La Paz, Bolivia, where I decided that I could and would earn a full-time living working online. For the 1 & 1/3 years that followed, I worked a day job in spatial data science and earned my final experience requirements to sit for my professional engineering exam. Back then, I

worked full-time in the day and part-time building my own brand at night. In other words, it was a ton of work. It all panned out however, when I emerged **479 days** later with data science experience, a professional engineering license, and a profitable business of my own.

In this guide I've documented exactly what steps I took to achieve this outcome. I shared tips for overcoming hurdles that you may be forced to overcome. I provided shortcuts to show you all the people, places, and things that really matter; in hopes that you won't have to waste time exploring some of the fruitless options that I did.

This brief guide is entirely free. I have not included any affiliate links in this book and I am not trying to sell you anything. My only intention for this guide is that it helps you in your quest to build a career or business in the big data fields.

THIS BOOK WAS WRITTEN FOR...

This book was written for people who want to develop or advance their careers in the data space. It's also for people who'd like to become independent consultants or entrepreneurs within the data niche. Because I'm an American expat who can often be found working from my luxury villa on the island of Koh Samui, Thailand, and because I travel to about 10 countries per year, my brand often attracts the "digital nomad" types. They too may find this guide useful.

Before I started my business, Data-Mania, I spent about a year working out all the details on how to separate myself from my brand online, where to house my personal interests (if at all), and how to maintain a professional

appearance while living an unconventional lifestyle. It took me a long while to get those details straightened out, and I've detailed my approach in the pages to come.

Disclaimer

Basically, what you see is what you get. I am sharing the lessons I learned from my hard-earned experience. If your experience or opinion is different than mine, that's ok. Take what I say with a grain of salt. Also, what worked for me may not work for you. You'll have to find your own way, but rest assured, what you'll read in these pages will help you do that.

Hi I'm Lillian – I'm the one writing this book

In case we've never been acquainted, let me take a minute to introduce myself. My name is Lillian Pierson, also known as @BigDataGal on Instagram and Twitter. I am a data strategist that specializes in training and advising. I'm the owner of two tech businesses, Data-Mania, LLC and Catapult Coaching. From 2010 to now, I've held down a full-time career while also traveling to 40 countries across 5 continents.

Since the birth of my baby back in 2016, I mostly travel just for work. Any given month, you can find me flying off to places like Dubai, Barcelona, and Istanbul (heck, I'm even waiting to hear back about a project this summer in Kazakhstan!). When I am not on-the-job traveling, I am working from my home office in Koh Samui, Thailand.

Working from home allows me to give my baby 3 to 5 hours per day of my undivided attention, often spent taking her for swims in placid, turquoise seas, or out on hikes in search of roaming water buffalo.

In my time as an independent consultant, I've authored 3 books and 4 online training courses. Data Science for Dummies is the only commercially available book that I've written for Wiley. The others were private label. My commercially available online courses are published by LinkedIn Learning. If you want to learn to use Python for data science, those will get you started.

Me and my team at Data-Mania, LLC are full steam ahead these days. We offer data strategy and training services as well as influencer marketing services. We're also planning a major relaunch of my coaching program for later in 2018.

Now that you know a little more about me, let's get into the details of what you need to do to break into data!

Five steps to land a data job in just six months

Here is the long and short of it... If you want to land a data job, you need to decide what sort of job you want to get, look at what's required to fulfill that position, take stock of your existing skills, and then decide how you'll fill your missing skill gaps. I've broken the process into the following five steps.

Step 1. Get focused on what you want to do

Go to some job boards, like those at Indeed or LinkedIn, and identify the titles for the roles that are of interest to you. Say for example, you're really great at internet marketing and you want to use your existing skills in a data science capacity... well, then, you'd search the listings for "marketing data scientist", "marketing data analyst" or "internet marketing analytics". Make a list of the job titles that are returned from this search.

Step 2. Review Job descriptions for the jobs that match your interest

Now go thru the job boards and survey the requirements for jobs with titles that are relevant to your interest. If you see some odd-ball requirements, assume that the job was mistitled. Make a list of the skills and experience that are most-oft required in those titles. These are the skills and experience requirements that you need to make sure you get before applying.

Step 3. Take inventory of your skills & experience

If you've been working in any sort of technical capacity whatsoever, chances are you've already developed some data skills. Make a list of things you already know how to do. Some examples might be Tableau, analytics, data visualization (GIS mapping included), projection analyses, outlier detection, trend analysis, etc…

Also include subject matter expertise you've developed— That can have A LOT of value in the data professions!

Step 4. Take stock of the skills you lack

Your skill-building efforts will be oriented around the type of data role you're seeking, be it in data science, data analytics, or data engineering.

So, for example, jobs in data science commonly ask for applicants to have skills and experience in things like Python, R, SQL, statistical modeling, regression analysis, Bayesian statistics, quantitative analysis, machine learning, recommendation engines, etc.

The requirements are specific for the role though, so look around and decide what skills and experience you need to develop to be eligible for the type of job you want.

Step 5. Train & Practice

Next, find online courses that will train you in the areas you lack. Get experience through Kaggle competitions or through real-life example exercises available that are for sale online. Depending on how experienced you already are, this really shouldn't cost you too much time or money.

CHAPTER TWO: THE SELF-TAUGHT DATA SCIENTIST CURRICULUM

- THE SELF-TAUGHT DATA SCIENTIST CIRRICULM
- COURSES FOR THE SELF-TAUGHT DATA SCIENTIST OR ENGINEER

THE SELF-TAUGHT DATA SCIENTIST CURRICULUM

Smart, scrappy, and resourceful data scientists are more in-demand than ever. Some data scientists are trained in academia. For people with degrees in non-quantitative fields, I recommend those formal academic programs.

But then there's the – driven data scientist, – the dedicated data scientist, **– the self-taught data scientist**! These are the people who aren't afraid to go in deep with data, math, and code. These are the type that love to explore the numbers and know that they don't need some academia professor forcing assignments down their throat in order to make progress in a field. **If that's you then, welcome to the club!**

If you've made it to this point in the book, then you know what skills you need to master. Now let's take a look at some of the best places you can go online to learn these skills. In my coaching program, I work with all sorts of self-taught data scientists and engineers. Some common skills they need to acquire have included:

Data Scientists	Data Engineers	Analytics Professionals
Python	Java	Tableau
R	Spark + Scala	Basic Math + Stats
Tableau	Hadoop	Data Storytelling
SQL	SQL	
Machine Learning	NoSQL	
Natural Language Processing	Pig / Hive	
Deep Learning		

Pro Tip: If you are deciding which skills to master first, I recommend that you learn a skill that is as versatile as possible (notice how Python, Spark, and Tableau are useful in more than one data niche??).

Now that you've narrowed down the skills you need to learn, it's time to find courses that can help you get there!

COURSES FOR THE SELF-TAUGHT DATA SCIENTIST OR ENGINEER

On the next page you'll find a small sample of the courses I recommend. These are generalist courses aimed to please the self-taught data scientist or engineer.

Python

Python for Data Science Intro Course
Python for Data Science Full Course
Python (for Data Engineering) Course

R

R for Data Science Intro Course
R for Data Science

Spark

Spark for Data Science and Engineering Course

Tableau

Tableau Course

Hadoop

Hadoop Course

NoSQL

NoSQL Course

SQL

SQL Course

Machine learning

Machine Learning Intro Course
Machine Learning Full Course

Deep learning

Deep Learning Course

Natural language processing

Natural Language Processing Book

I've recommended these courses in particular because they're designed to make it as easy as possible for you to succeed. It might take some time to complete them, but once you have a few of these courses under your belt, you should be feeling more confident; At least confident enough to get started putting your newly-developed skills to use!

CHAPTER THREE: SOME OF THE BEST WAYS TO GET REAL-WORLD PROGRAMMING EXPERIENCE IN DATA

- BLOOM WHERE YOU ARE AT
- TAKE A DATA SCIENCE INTERNSHIP
- TAKE ON SOME FREELANCE WORK

Some of The Best Ways to Get Real-World Programming Experience in Data

Now that you've spent the long, hard months (or years) required to get yourself trained, you really want to get a job in the field. The problem is that everyone seems to want someone with experience. What are you to do?

Well, I say, go out and get yourself some experience! This chapter introduces my ideas on the best ways to get real-world programming experience in data.

Option A: Bloom where you are at

If you're lucky enough to have a job that requires at least some data analysis, then you can easily get a little on-the-job experience. Simply look for new ways that you can get better or more efficient results.

Maybe that involves writing Python scripts to automate a few of your routine tasks. Maybe you could sit down with your manager and explain to him (or her) some of the things you're able to do with your newly-earned skills. If you tell him that you'd like to find ways to use these skills, I bet he will come up with ideas for models or scripts you can build that will make his life easier. This is one of the ways I first started getting experience in data science.

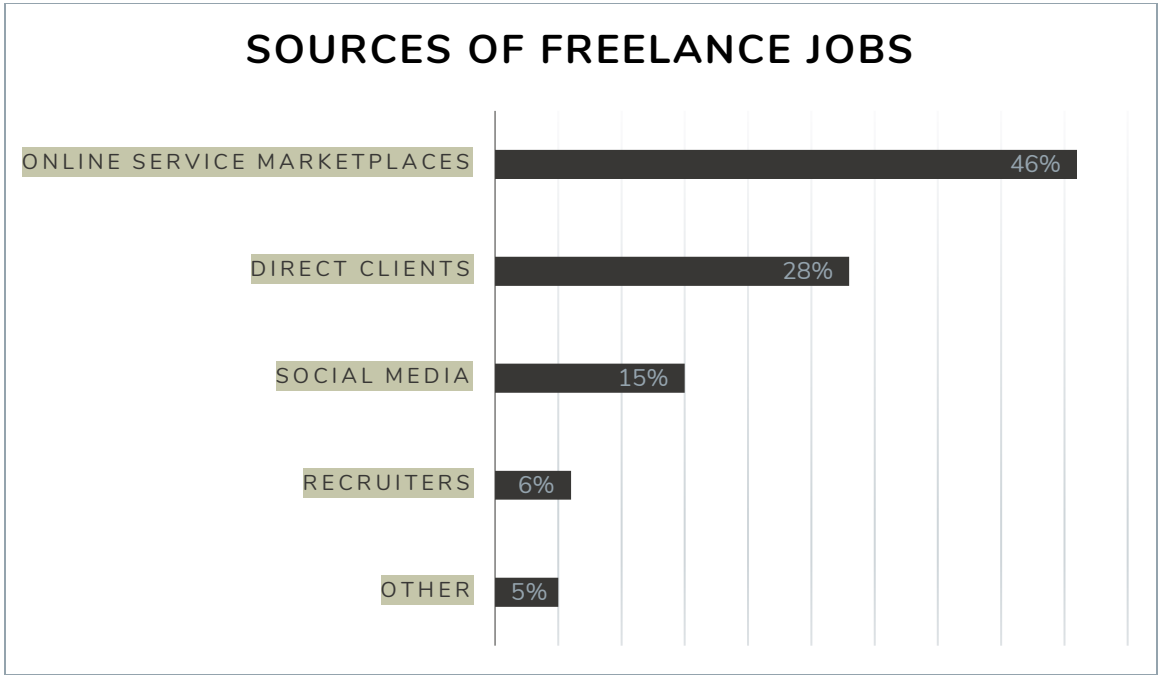
Option B: Take a data science internship

Another option for getting experience is to take an internship position. There are tons of internships out there. You can see for yourself on LinkedIn here. The only problem with this route is that most of these positions are location-dependent. Depending on where you live, there may be few or no internships available. Think twice before relocating for an internship.

Option C: Take on some freelance work

The third way to get real-world programming experience in data science is to do some freelance work. The problem here is that you probably don't know where to look or how to win jobs. Let me break that down for you.

During the past few years, active freelancers are finding jobs through the following means:



The fastest way to get experience is to go to online marketplaces. *Direct clients* are generally something you'll establish over time in your consulting career if you choose to keep your consultant status rather than become an employee.

FINDING WORK THROUGH ONLINE MARKETPLACES

There are dozens of online marketplaces where you can find opportunities to get experience. In fact, online marketplaces are the easiest way to get real-world programming experience in data. Some of the top online marketplaces are:

- **Upwork** – Upwork.com is by far the biggest marketplace for online services. Over $1 billion US is awarded on the platform each year.

- **Toptal** – Toptal is an upper-echelon market place for only the top 3% of technical consultants who apply. If you're an experienced software developer and you're just looking to get some coding experience in the data science area, Toptal may be a good option.

- **LinkedIn Pro Finder** - LinkedIn ProFinder is LinkedIn's very own services marketplace. It integrates directly with your LinkedIn profile, which is nice for built-in visibility. They're only accepting US-based contractors at the moment, though.

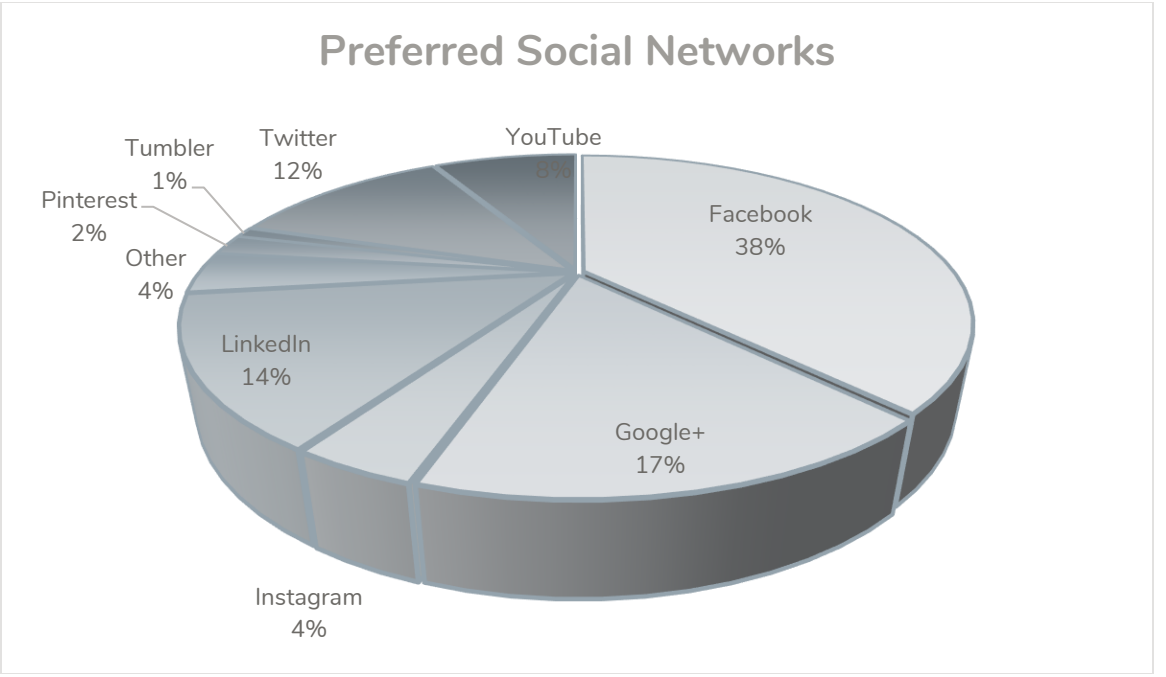
- **Guru** – Guru.com is a nice little marketplace that offers some great options for showcasing your existing portfolio.

- **Freelancer** – Freelancer.com is a lot smaller marketplace than Upwork, but it's still awarding tons of work to contractors. Expect less competition on Freelancer.

MARKET YOUR SERVICES THROUGH SOCIAL MEDIA

Social media marketing can be a very effective way to find opportunities that get you experience, if you have an established personal brand. This point goes back to the importance of developing your own brand—a topic I mentor people on within this invite-only Facebook group (feel free to request to be added).

To provide some reference though, most contractors prefer Facebook, Google+, and LinkedIn, as their favorite social networks across which to promote their skills and services.



To do this, you'll need to sit down and think about what network gives you the most visibility with your target audience.

For example, if you're an aspiring data scientist, your "target audience" is probably the group of people who are willing to pay for services like data munging, data visualization, predictive analysis, web-scraping, etc... So, you'll

need to spend time defining your target audience and the effectiveness of your reach across various social channels.

Of course, to get real-world programming experience in data, there's a lot more involved than just finding the work. Once you've found it, then you've got to win your clients trust, maintain that trust, and hopefully build a long-term relationship with that client. But for now, at least you've got some ideas on where to start.

If you want more guidance on landing freelance jobs where you'll get real-world programming experience, I highly recommend the Udemy Course: "Freelance: Start Fast Without Making All Beginners' Mistakes" *(In fact, that Course is the source of the statistics I referenced throughout this chapter).*

As you start to reach out to potential clients in the freelance marketplace, it's also important to consider your own brand. Your brand is the vehicle by which you'll sell yourself online! While profiles and reviews on freelance websites are a part of this, they definitely aren't the only thing you have to worry about. Once you've set up the basics, it's time to build and expand your online presence!

CHAPTER FOUR: YOUR DATA-SAVVY IS ATTRACTIVE – SO, SHOW IT OFF

- WHY IT'S IMPORTANT TO HAVE YOUR OWN BRANDED SPACE
- THE FIRST STEP TO BRANDING IN THE DATA PROFESSIONS
- WHY SOCIAL MEDIA IS IMPORTANT FOR TECHNICAL PROFESSIONALS

YOUR DATA-SAVVY IS ATTRACTIVE – SO, SHOW IT OFF

If you're like most people, when you think about the idea of branding yourself as a data professional, your next thought goes something like, "Me, a brand? I don't even know what to do with that concept." If so, I can totally relate.

> ***"Why would I want to share my life with people who are not already here and in it?"***

Personally, it was as recently as 2011 that I didn't have a Facebook account. I didn't even have any social media accounts, let alone have a brand or an online following. I preferred to live offline, thinking "why would I want to share my life with people who are not already here and in it?". In short, I valued my privacy.

> ***It's really hard to get a job when no one knows who you are.***

This all changed though when I had to go on a job hunt and I discovered that it's really hard to get a job when no one knows who you are. I read a few books and decided to put up some social media accounts, as they suggested. The easy part (opening the accounts) was done, but I didn't even begin figuring out how to leverage them until another 6 months down the road.

Long story short, these days I am most active on LinkedIn, Instagram, and Twitter. I've met soooo many incredible professionals through the work I do on my brand. I've now got about 500,000 data enthusiasts following my work through social media.

More importantly though, by late 2013, my brand was providing me enough business opportunities that I could quit my day job and open my own business. On average days lately, I get about five good new business opportunities showing up in my inbox per week, completely unsolicited by me. And for a "no one" like I was, now you can see why I advocate the power of branding yourself in the professional world.

WHY IT'S IMPORTANT TO HAVE YOUR OWN BRANDED SPACE

You'll benefit from building a brand in 5 main ways. Those are:

- BENEFIT 1. STRONG BRANDS CREATE A SENSE OF INDIVIDUALITY AND "SEPARATENESS" IN THE MARKETPLACE, SO THAT YOUR CLIENTS CAN EASILY DIFFERENTIATE YOU FROM YOUR COMPETITORS.

  The goal of personal branding is to be known for who you are as a professional, and what you stand for. It's an opportunity for you to show and develop your unique value proposition.

- BENEFIT 2. YOUR BRAND INFORMS THE WORLD ABOUT WHO YOU ARE AS A PROFESSIONAL AND AS A PERSON.

  The goal of personal branding is to be known for who you are as a professional, and what you stand for. Your brand reflects who you are; Your opinions, values, and beliefs. These are visibly expressed by what you say and do, and how you do it.

- BENEFIT 3. THE BRANDING PROCESS ALLOWS YOU TO TAKE CONTROL OF YOUR IDENTITY AND INFLUENCE HOW OTHERS PERCEIVE YOU AND THE SERVICES YOU OFFER.

- BENEFIT 4. A STRONG BRAND EFFORTLESSLY ATTRACTS CLIENTS AND OPPORTUNITIES.

  By building up valuable resources around your brand, you position yourself in the mind of the marketplace as *the* service provider of choice to dominate the market!

- BENEFIT 5. BRANDING ALLOWS YOU TO GAIN NAME-RECOGNITION IN YOUR CUSTOMER'S MIND.

  Branding helps you make lasting impressions and be super-rewarded for your individuality.

THE FIRST STEP TO BRANDING IN THE DATA PROFESSIONS

The first step in developing a brand is deciding where it will live.

You need a central home on the web. That could be something simple, like your LinkedIn profile. Inevitably I recommend people set up their own self-hosted WordPress site, so that they can own and control their own personal space. You can also go with 3rd party platforms like Wix or Weebly, but again – you will be limited on what you can do, because you don't technically own your property (it's more like you're leasing it).

In my coaching program, I advise clients to include at least the following elements in their websites:

- A great avatar and bio box
- An About page
- A blog
- A stellar tagline
- A logo show case
- Plenty of calls-to-action
- Social media widgets

WHY SOCIAL MEDIA IS IMPORTANT FOR TECHNICAL PROFESSIONALS

Social media is important because it's the medium across which you meet new like-minded professionals with whom you can align. It is the gateway to brand exposure and it's a place where you can give back to your community.

When it comes to social media for professionals, all networks are not the same.

When it comes to social media for professionals, all networks are not the same. Each network has its own set of micro-communities. Each network needs its own type of content and approach. It takes time and effort to figure these out, but online courses and books can be helpful in this process. Like I said, the 3 networks I prefer are:

Instagram – I LOVE Instagram and there is a really solid technical community established on the platform. This said, Instagram can be a tough nut to crack when it comes to growth. One tip I can give you here is that automation is definitely NOT the way to go**.** Authenticity and storytelling are the name of the game over at IG. I have managed to grow my account to almost 80k followers, but it is embarrassing to say how long that's taken me. I am still learning how to use the platform, even after 5 years.

LinkedIn – LinkedIn is the place to be for all things professional. With Microsoft's recent acquisition of the platform, it has what it needs to accomplish its mission. I do everything in my power to give back to my

community over on LinkedIn, because I know most of these people are like me – hard-working and dedicated to their profession. I like people like that!

Twitter – Twitter has a super engaged data community that's hard to miss. It's a great place to go to find data news when you're getting started in the field.

As far as data professionals and social networking goes, based on my experience, LinkedIn and Twitter have the largest established communities. I am helping to foster a community over on Instagram, but the network is yet young. Instagram's steep learning curve discourages many, I think – but I am hoping this will change in the not too distant future.

As far as my experience with audiences across social, on Instagram you're going to find all your coders and programmers – the people who are actually doing and building. On Twitter and (to an extent) LinkedIn, you're likely to find more business users instead.

After you decide which social media networks to tackle, it'll be time to start building your community. I suggest you start by following some of the top data professionals on social. By following the influential accounts, I discuss in the next chapter, you can gain new information about these technical fields, while also beginning the all-important process of networking.

Chapter Five: Top Tech Influencers for Data Professionals to Follow on Social Media

- TOP TECH INFLUENCERS FOR DATA PROFESSIONALS TO FOLLOW ON TWITTER
- TOP TECH INFLUENCERS FOR DATA PROFESSIONALS TO FOLLOW ON INSTAGRAM
- TOP TECH INFLUENCERS FOR DATA PROFESSIONALS TO FOLLOW ON LINKEDIN

Top Tech Influencers for Data Professionals to Follow on Social Media

In the last chapter, you learned about the power of branding in the data professions. You've seen why it's important to get active on social media networks. Now I want to give you a brief heads up on some top tech influencers for data professionals to follow.

These recommendations are all made with you in mind.

Unlike all those Twitter popularity contests you see, this list isn't about promoting businesses or who's got the most followers. These recommendations are all made with YOU in mind**.** That's why I have taken the time to spell out exactly what you can expect to gain from following these individuals.

And without further ado…

Top Tech Influencers for Data Professionals to Follow on Twitter

Andrej Karpathy

Karpathy is the guy to follow if you're a deep learning enthusiast. If you follow him, you're going to get access to a live, direct stream of deep learning resources that he creates and generously shares with the world through his GitHub account. By following him on Twitter, you're signing up for access to updates on what's happening,

front-and-center, with deep learning, AI, and even self-driving cars — straight out of Silicon Valley, from a deep learning guru himself.

IAN GOODFELLOW

Like Karpathy, when you follow Goodfellow, you're signing up for a live stream of updates that are in-deep with cutting edge advancements in deep learning. Unlike Karpathy, Goodfellow seems bent on helping newcomers enter the deep learning field. He has even gone so far as to publish a free Book on deep learning, appropriately titled Deep Learning Book. Keep an eye on his Twitter feed for fresh how-tos and news releases on deep learning and Google Brain.

RONALD VAN LOON

When you follow Ronald, brace yourself for the show of a lifetime (that is if you're a data nerd, anyway). Ronald covers tons of conferences and events, and he video casts much of what he sees there. So, if you don't want to drop the pretty-penny it costs to attend data conferences around the world, you can learn vicariously through Ronald van Loon. He also started an interesting little YouTube channel that teaches business users the ABC's of big data.

The last but not least reason to follow Ronald is that he's real – from my personal experience working with him, I've found Ronald to be a genuine, generous, and ethical influencer (that really can't be said for everyone, believe me!!)

Top Tech Influencers for Data Professionals to Follow on Instagram

Derek Fermaint

Derek (@dataspective) shares some awesome stuff during his processes of building machine learning algorithm models. Through Instagram, he gives his audience a reality-TV glimpse of a day in the life of a machine learning engineer. He's always sharing all sort of amazing learning resources, so if you're into data – following Derek on Instagram should contribute to your professional growth.

Laura Medalia

Laura is a true leader for young people and women in tech. There is so much you'll benefit by following @codergirl_, especially if you're considering going into data engineering or becoming a machine learning engineer. Through her Instagram posts, Laura tells the story of what it's like to work as a developer at a start-up in New York City. In her InstaStories, she shares images and videos that document conversations she has with her fellow developers, fun things they do together, and so much more.

Lillian Pierson

I *must* include myself here because, technically-speaking, I have the largest Instagram account in the data niche. By following my Instagram account, you're going to see some of the cool things that are possible for you when you think outside-the-box when it comes to your data career. I share moments, motivational posts, and words of wisdom that tell the story of what it's like to be a technical entrepreneur (wife, and mother of one).

Top Tech Influencers for Data Professionals to Follow on LinkedIn

Bernard Marr

As one of the top tech influencers for data professionals to follow, the best thing about following Bernard is that you'll get access to his high-level summaries on how businesses are benefiting by deploying blended data engineering, data science, and analytics solutions. His case studies are quite valuable if you need to quickly learn how big data benefits business, and you don't want to have to rack your brain wading through a bunch of overly-technical mumbo-jumbo. If you want quick and easy-to-understand updates on how to apply analytics to business, following Bernard is a great way to get those.

Carla Gentry

Carla is a real person, and her authenticity has never been in doubt. She has several decades of experience doing data science (or what was essentially "data science" before we called it that). The best thing about following Carla are her professional opinions. When she shares good articles, she tends to relay her opinion and experience on technical matters within the industry. When you follow her, you'll get access to micro-segments of her experience, and what she's learned. If you truly want to understand all areas of data science, from cutting-edge developments to age-old implementation, following Carla will give you that, in micro-batch.

Kyle McKiou

I only recently discovered Kyle on LinkedIn, but I love what he is doing with his community there. He's focused on mentoring data professionals, or aspiring data professionals, to be the best that they can be. If you implement all of

the suggestions I lay out for you in this brief guide and have still not landed a good opportunity, Kyle's LinkedIn tips may be of additional help.

Once you've made a few connections and gotten a feel for what makes a successful data presence on social, it's time to get started on building up your social media account. And, for that, you're going to need content. In the next chapter, we look at building your very own data science blog content.

CHAPTER SIX: FIFTEEN TIPS ON BUILDING AN AWESOME DATA SCIENCE BLOG

- WHY LIFE IS SO GOOD WHEN YOU'VE GOT AN AWESOME DATA BLOG
- WILL YOU CREATE ALL THE CONTENT YOURSELF?
- HOW TO GENERATE YOUR CONTENT IDEAS
- WHAT TYPES OF CONTENT WILL YOU PUBLISH?
- WHEN WILL YOU PUBLISH YOUR CONTENT?
- HOW WILL YOU AVOID TYPICAL BLOGGING PITFALLS?
- WHAT SITES WILL YOU USE AS INSPIRATION?

FIFTEEN TIPS ON BUILDING AN AWESOME DATA SCIENCE BLOG

In the past few chapters, you learned why making your own branded space is a game-changer for working professionals and independent data consultants. Today we're going to talk about how you can become the owner of an awesome data science blog that delivers you loads of highly-targeted traffic.

Before going into details on how you can do this, let's look at why you should be interested. Maybe you're a coder, an analyst, or some other type of highly-trained STEM professional. In this case, you probably don't have a blog (yet), and I'm guessing that's because you're not aware of how much value a well-crafted blog can generate.

WHY LIFE IS GOOD WHEN YOU'VE GOT AN AWESOME DATA BLOG

Let me use myself as an example, to demonstrate some of the opportunities that can present themselves as result of trying to maintain an awesome data science blog. I started blogging about data back in 2012. To be honest, I am not sure how "awesome" the blog was back then. Nonetheless, it quickly reaped the following rewards:

Paid freelance jobs (by 2012): Multiple solicitations found their way to my inbox from editors asking to pay me to write blogs on data for their big-name websites.

Sponsorship (by 2012): Big businesses (like IBM, for one) began emailing me telling me that they will pay me to publish a sponsored post on the data topic of their choosing.

Consulting leads (by 2013): United Nations staff emailed me asking for my technical consulting services because they had seen my blog post related to humanitarian deployment and spatial intel.

Book deals (by 2014): A Wiley Acquisitions Editor emailed me with an offer for my first Book deal.

I could go on. My point is that a blog can be just the boost you need to step onto the next level in your career, or even to start your own business, like I did.

Now let's get back to the main point of this post – how you can become the owner of an awesome data science blog. Before starting your blog, make sure to decide on answers to the following questions:

WILL YOU CREATE ALL THE CONTENT YOURSELF?

You can either create your blog content yourself or you can hire a technical writer to help you. Most blog owners write their own posts. I advise my clients to create their own content for the following reasons:

- It's a great way for you to keep current on the latest in the industry.
- It's a great medium across which you can initiate genuine working relations with people in your target audience.

- It offers built-in quality-control.
- It's more affordable

Never apologize for being successful!

If you already own a profitable business, you probably shouldn't be writing blog content! In this case, you can accept guest posts and/or hire a professional writer to assist you in developing content**.** After all, you need blog content for it's in-bound marketing value, but you probably have your hands full in other areas of your business and shouldn't be writing it yourself. Never apologize for being successful!

Pro Tip: If you opt to outsource your content creation, please know that some data writers are charging up to $3/word these days. Expect to spend a fair bit of time sourcing someone who will create technical content for affordable rates.

How will you generate your content ideas?

Right off the bat, I can think of 3 easy ways to generate topic ideas for an awesome data science blog. Those are:

- What questions are you being asked by people you work with or who work in the data field? Create content that answers questions you're commonly asked.

- Look at what's trending in the data threads on Klout Explore, LinkedIn or CrowdFire Content Recommendations. Take some of those topics and generate your own content about them.

- Find some popular discussions on Reddit or Quora and use those as a topic for your own content.

I find it easier to generate content ideas in batch, so I don't have to scramble every time I need to publish. Generating a list of good ideas every month or two should be sufficient.

What types of content will you publish on your blog?

If you've read this far then you're probably a tech professional. Blogs, vlogs, written coding demos, and video coding demos are all great forms of technical blog content. What's more, the tech audiences love to learn about newsworthy headlines, new products, and new services that can help them do their jobs more effectively.

When will you publish your content?

It's a good idea to create an editorial calendar for at least one or two months in advance. Editorial calendars are helpful for keeping ourselves accountable to a content publishing plan. Creating a formalized content plan will help you create and maintain a broader structure in your publications, so your blog is more than just a smorgasbord of technical topics spattered randomly across time.

It's important that every effort you expend building your brand be spent in a strategic manner, to help you reach your over-arching goal. A content marketing plan and editorial calendar will help you work strategically.

How will you avoid typical blogging pitfalls?

The typical blogging pitfalls are related to either quantity or quality.

As far as quantity, bloggers tend to get behind and make excuses to not publish. Before long, they've abandoned their blog, and thus their audience – so, it should come as no surprise when their audience abandons them. Brainstorming a list of content ideas, generating a content marketing plan, and establishing an editorial calendar are all great ways to safeguard yourself against letting your blog (and online presence) slide into oblivion.

As far as content quality tips, I suggest the following:

- Make sure your grammar and spelling are correct. Word's Review features should be sufficient.

- If you've written an article, check your tone to see that it's not too formal and academic. You want blog posts to be conversational in tone, as they are meant to help you establish a rapport with your readers. Word offers a "Speak selected text" feature. I like to listen to my writing and edit its tone that way before I publish it.

- Make sure to site relevant sources and avoid references that come from non-credible sources.

WHAT SITES WILL YOU USE AS INSPIRATION?

It's always a good idea to find a few people or websites that you can use as inspiration. That way, when you get stuck, you can refer back to these sources and see how they handle that particular issue.

What sites you'll use for inspiration depend on whether your building a blog for your personal-professional brand, a community, or a small business. Let the following sites help get you started in your quest for inspiration:

- Analytic Vidhya
- R Bloggers
- DataFloq
- Revolution Analytics
- Edwin Chen
- Pete Warden
- Sebastian Raschka

Ok, so there you have it. If you've read this far then congratulate yourself! You've already learned the basics of using content marketing to build an awesome data science blog. What's next? Practice, of course.

Go ahead and get started on building an awesome data science blog by using these tips to create your first blog post. Once your web presence has been established, it's time to start proactively building your data science portfolio.

CHAPTER SEVEN: A NEWCOMER'S GUIDE TO BUILDING A DATA SCIENCE PORTFOLIO

- DECIDING WHERE TO PUBLISH YOUR PORTFOLIO
- DECIDING WHAT TO PUBLISH WHEN BUILKDING A DATA SCIENCE PORTFOLIO
- SOME EXCELLENT EXAMPLES TO INSPIRE YOUR PORTFOLIO

A Newcomer's Guide to Building a Data Science Portfolio

The point of building a data science portfolio is to demonstrate your skills to prospective employers. So before going into too much detail, let's identify what these prospects are actually seeking.

Let's be real. When it comes down to it, prospective employers are looking to hire data scientists who generate monetary value by either reducing waste or increasing revenues. That's why you want to make sure your CV is value-driven, and not just the normal litany of the hundreds of skills you've acquired over the course of your career.

Although it's hard to showcase the value you'll add, you can showcase your valuable expertise and data science skills. Prospective clients all have different needs, but the good news is that there are some fundamental skills common to most data science roles. Those are:

- Programming in Python and/or R
- Data munging
- Predictive modeling
- SQL experience
- Data storytelling
- Personality attributes: Prospects are looking for team players, problem solvers, and tenacious individuals

Just by taking the time to publish a few pieces from your coding portfolio, you're showing that you're committed to, and passionate about, the field. That helps demonstrate that you've got the personality attributes that prospective employers are looking for.

DECIDING WHERE TO PUBLISH YOUR PORTFOLIO

When it comes to building a data science portfolio, there are a few good options on where to publish your work. Personally, I prefer to publish Jupyter NoteBooks on GitHub for Python and RPubs for R code. You can, of course, publish your code to Kaggle.

The best option, in my opinion, is to publish your portfolio on your blog, along with some explanation on the concepts you're demonstrating. Doing this allows you to show off your technical communication skills. People who can communicate technical concepts in plain-language are highly sought-after. You can use your blog and coding portfolio as a place to practice this through writing and videos.

As far as publishing code to your blog, that's made very easy by using embedded viewers. The embeddable viewer for Jupyter NoteBooks is called nbviewer, and for R is RPubs (here are the instructions for that).

DECIDING WHAT TO PUBLISH WHEN BUILDING A DATA SCIENCE PORTFOLIO

Ultimately you want to be building a data science portfolio that concisely demonstrates your ability to carry out all the data science tasks that'll be required of you. To that end, I'd consider building a data science portfolio that shows people how to do:

- **Data munging** – In other words, show people how to clean, restructure, and reformat raw data into the form that's needed for use in modeling and analysis.

- **Describing and inferring** – Use statistical methods to describe and make inferences from your datasets after you've cleaned them.

- **Data showcasing and storytelling** – Here is where you show your proficiency at communicating data insights to different types of audiences.

- **Predictive modeling and machine learning** – Demonstrate how you're able to use machine learning methods to make predictions (hopefully predictions that are relevant to business).

You can put these all together piecemeal, or build an end-to-end project, that walks through each of the important components. The latter is probably the better bet.

SOME EXCELLENT EXAMPLES TO INSPIRE YOUR PORTFOLIO

When you're building a data science portfolio, it's always nice to look at some examples. I have been quite impressed and inspired by the following data science ports:

- Donne Martin
- Sebastian Raschka
- Jake Vanderplas

You may notice that I left myself off the list. If you're wondering, "What about you, Lillian? Where's your data science portfolio?" Well, as a matter of fact, I pretty much use my Lynda's / LinkedIn Learning Courses as a coding portfolio. Although I have published some demos on GitHub, RPubs, and my blog, I've been so busy with my business, I haven't had the time or interest to do more.

Now that you've got your path to success laid out, what are you waiting for? Get in there and start making a future for yourself in the data science industry!

CONCLUSIVE REMARKS

We've come to the end of this brief guide, so you're probably expecting me to pitch you something, right? Well, I actually didn't have any sales pitch in mind, so…

I already mentioned that I offer data training and strategy services, and that I am a tech influencer. If you or someone you know is in need of this type of work, then you can take a closer look at the Data-Mania website.

Otherwise, I'd love it if you'd help spread the news about this Badass's Guide! Post a link on your website (http://www.data-mania.com/blog/guide-to-breaking-into-data/), or perhaps post a link to it on social. If, a few months down the road, you find that this guide was instrumental in improving your career prospects, it'd be great if you'd write a review about it on your blog!! Those are just a few ideas off the top of my head.

How you do one thing is how you do everything.

In closing, I'll just offer a few words of wisdom. Remember that, how you do one thing is how you do everything. Today is the only chance you have to make your dreams come true. Don't sell yourself short with half-steps and excuses.

The people who succeed in data are the same people who succeed in life. Nothing good comes easy. You've got to persevere to the point of being stubborn.

There will be mean people trying to keep you down. There will be naysayers, and lastly, there will be those "golden opportunities" that crop up in an attempt to keep you from achieving your dream. Stay the course, believe in yourself and what you're doing, hold your own standards high, and you will succeed.