VIRTAVIS
LEARNING

FREE KIT · 2026 EDITION



FOR CAREER STARTERS AND CAREER CHANGERS

The Analyst Portfolio Kit

Templates, a worked example and checklists to build a portfolio a recruiter can read in two minutes.

- **A portfolio plan** — three projects, one of them your own angle
- **Case-study template** — the fixed top box recruiters read first
- **Notion portfolio template** — one public link for everything
- **Dashboard sharing guide** — including the Power BI licence wall
- **CV and LinkedIn pack** — project bullets, headline, Featured
- **Interview walkthrough deck** — six slides to talk a project through



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Check the numbers. Say what they mean.

virtavis.com

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This guide (PDF)
Read it once, then keep it open while you build.

Notion portfolio template
Duplicate it from the link on the download page.

Interview walkthrough deck
PowerPoint file. Opens in Google Slides and Canva too.

README template
Markdown file for your GitHub projects.

A NOTE FROM SOPHIE

I made this kit for people building their first analyst portfolio, whether you are starting out, changing career or turning course work into evidence. It is free, and it works whichever course or dataset you use.

A portfolio cannot promise you a job. What it can do is give the person screening your CV a reason to look closer, and give you a project you can talk through with confidence. The habit that makes that happen is the one I teach in every Virtavis course: **check the numbers, then say what they mean.**

Sophie Lumpa Data and Business Intelligence Specialist · Founder, Virtavis Learning

SECTION 01

How a portfolio gets read

Your portfolio is rarely read top to bottom. It is skimmed by different people at different stages, each with one question. Build it for those readers.

THE FOUR READERS

STAGE	WHO AND HOW LONG	WHAT YOUR PORTFOLIO NEEDS
1 **CV and LinkedIn screen**	Often a recruiter or HR screener who is not technical.	Your portfolio link sits in the CV header and on LinkedIn, and it opens first time.
2 **The click-through**	A skim of the front page and the top of one or two projects. Minutes, not an afternoon.	Each project opens with the question, the finding with a number, and the recommendation.
3 **Hiring manager review**	A closer look at one project: how you cleaned the data, what you checked, what you ruled out.	Show the messy data, your cleaning decisions and the limits of your answer.
4 **Interview walkthrough**	"Talk me through a project."	A six-slide deck and a two-minute story you have practised out loud.

WHAT STANDS OUT

- Opens with a business question and the person who asked it
- Leads with the finding and the recommendation, then the method
- Shows the messy data and the cleaning decisions
- Puts a number on the finding
- Three finished projects across different skills
- Says what was checked, ruled out and still uncertain

WHAT SINKS IT

- Titanic, Iris or a generic "superstore" sales dashboard
- A list of tools with no "so what"
- Files to download instead of links to click
- Long code or long text with no summary at the top
- Polished, generic wording that could belong to anyone
- Broken links, private pages, empty profiles

The one-minute test

Give a friend who does not work in data one minute with your portfolio. If they can tell you what one project found and what you recommended, it is ready for a recruiter.



SECTION 02

Plan your portfolio

Three finished projects beat ten half-finished ones. Give each one a different main skill, so together they cover what a junior analyst job advert asks for.

THREE PROJECTS, THREE SKILLS

1

A spreadsheet project

EXCEL OR GOOGLE SHEETS

Cleaning, lookups, a PivotTable summary and one clear chart. Shows you can be useful from day one.

2

A SQL or Python project

SQL, PYTHON (PANDAS)

Joining tables, checking totals, answering a question a spreadsheet would struggle with. Put the code on GitHub.

3

A dashboard or report

POWER BI OR TABLEAU

A one-page dashboard someone could use every week, with a short note on what to look at first.

ADD YOUR OWN ANGLE

Recruiters see the same course projects again and again. Make at least one project yours in one of these ways.

Ask a different question
If you used course or practice data, choose a question the course did not ask.

Add a second source
Join in weather, bank holidays, population or prices to explain a pattern.

Pick your sector
Use data from the sector you want to work in: health, retail, transport, housing, charity.

Use your experience
If you have worked in a shop, a school or a warehouse, ask the question your old manager would have asked.

FREE UK DATA FOR YOUR OWN PROJECT

SOURCE	WHERE	GOOD FOR
ONS	`ons.gov.uk`	Population, employment, prices, retail sales, regional statistics.
data.gov.uk	`data.gov.uk`	Thousands of UK public-sector datasets in one catalogue.
Transport for London	`tfl.gov.uk/info-for/open-data-users`	Journey, cycle hire and station data.
Police.uk	`data.police.uk`	Street-level crime and outcomes by month and area.
Food Standards Agency	`ratings.food.gov.uk/open-data`	Food hygiene ratings for every inspected business.
HM Land Registry	`gov.uk (search "Price Paid Data")`	Every residential property sale in England and Wales.
NHS England	`england.nhs.uk/statistics`	Waiting times, A&E attendances and other performance data.

SECTION 03

The case-study template

Every project page follows the same shape. The top box is for the recruiter who reads for one minute. Everything below it is for the hiring manager who reads for ten.

The top box

WRITE THIS LAST

BUSINESS QUESTION	One sentence, using the formula at the foot of this page.
WHO ASKED	A role, real or realistic: operations manager, marketing lead, finance director.
KEY FINDING	One sentence with a number in it.
RECOMMENDATION	What you would do next, and who would do it.
TOOLS AND DATA	The tools you used and where the data came from, with a link.

BELOW THE TOP BOX

1. **The data**
   Source, date range, number of rows, what one row means.
2. **What I cleaned**
   The problems you found and what you did about each one: duplicates, blanks, odd dates, totals that did not match.
3. **What I checked and ruled out**
   The checks that make your answer trustworthy, and the explanations you tested and rejected.
4. **How I got the answer**
   Three to five steps, each with a screenshot, query or chart. Not every step you took.
5. **Limits and next steps**
   What the data cannot tell you, and what you would look at with more time or more data.

WRITING RULES

- ☑ Write the top box last, once you know the answer.
- ☑ One idea per sentence. If you can delete a word, delete it.
- ☑ If you used AI to help with code or wording, check every number and make the text sound like you.
- ☑ Use the person's words: "van route", not "optimisation model".
- ☑ Label every chart with what it shows, not just what it measures.
- ☑ Never claim business impact you did not have. "Would save" and "in this data" are honest.

WRITE THE BUSINESS QUESTION FIRST

[Who] needs to know **[what]** so they can decide **[decision]**.

WEAK	"I explored London cycle hire data."
STRONG	"The operations team needs to know which docking stations run empty before 9am, so they can decide where to send the morning van."

FILL-IN PAGE: YOUR PROJECT

Print this page or copy it into your notes. Fill it in before you open Notion.

Business question	
Who asked	
Key finding	
Recommendation	
Tools and data	
The data	
What I cleaned	
What I checked and ruled out	
How I got the answer	
Limits and next steps	

SECTION 04

A worked example

A realistic case study built from public bike-hire data. The figures are illustrative: they show the shape and the level of detail, not real results to copy.

Which bike docks run empty before 9am?	EXAMPLE
BUSINESS QUESTION	The operations team needs to know which docking stations run out of bikes before 9am on weekdays, so they can decide where the morning redistribution van should go first.
WHO ASKED	Operations manager, city bike-hire scheme (realistic scenario).
KEY FINDING	Twelve of 180 stations in the sample ran empty on at least half of weekday mornings, and nine of the twelve are within 500 metres of a mainline station.
RECOMMENDATION	Start the van route at those twelve stations and refill them by 7:30. Recheck in four weeks.
TOOLS AND DATA	Excel (Power Query, PivotTables), public journey data for one quarter, station list with coordinates.

WHAT I CLEANED

- Removed 2,140 journeys under one minute that started and ended at the same dock (bikes re-docked, not trips).
- Found 31 station names spelled two ways and matched them on station ID instead.
- Excluded two weeks of school holidays after checking they changed the morning pattern.

WHAT I CHECKED AND RULED OUT

- Totals by day matched the published monthly figure to within 0.5%.
- Ruled out weather: the twelve stations ran empty on dry and wet mornings alike.
- Ruled out one-off events by requiring empty mornings in at least six separate weeks.

LIMITS

Dock capacity changed at two stations during the quarter, and the data shows journeys, not live dock levels, so “empty” is estimated from departures minus arrivals.

Why this works

A recruiter gets the answer from the top box in under a minute. A hiring manager can see the judgement: the same-dock trips, the name mismatch and the holiday weeks are exactly the problems real data has. Every number can be traced back to a step.

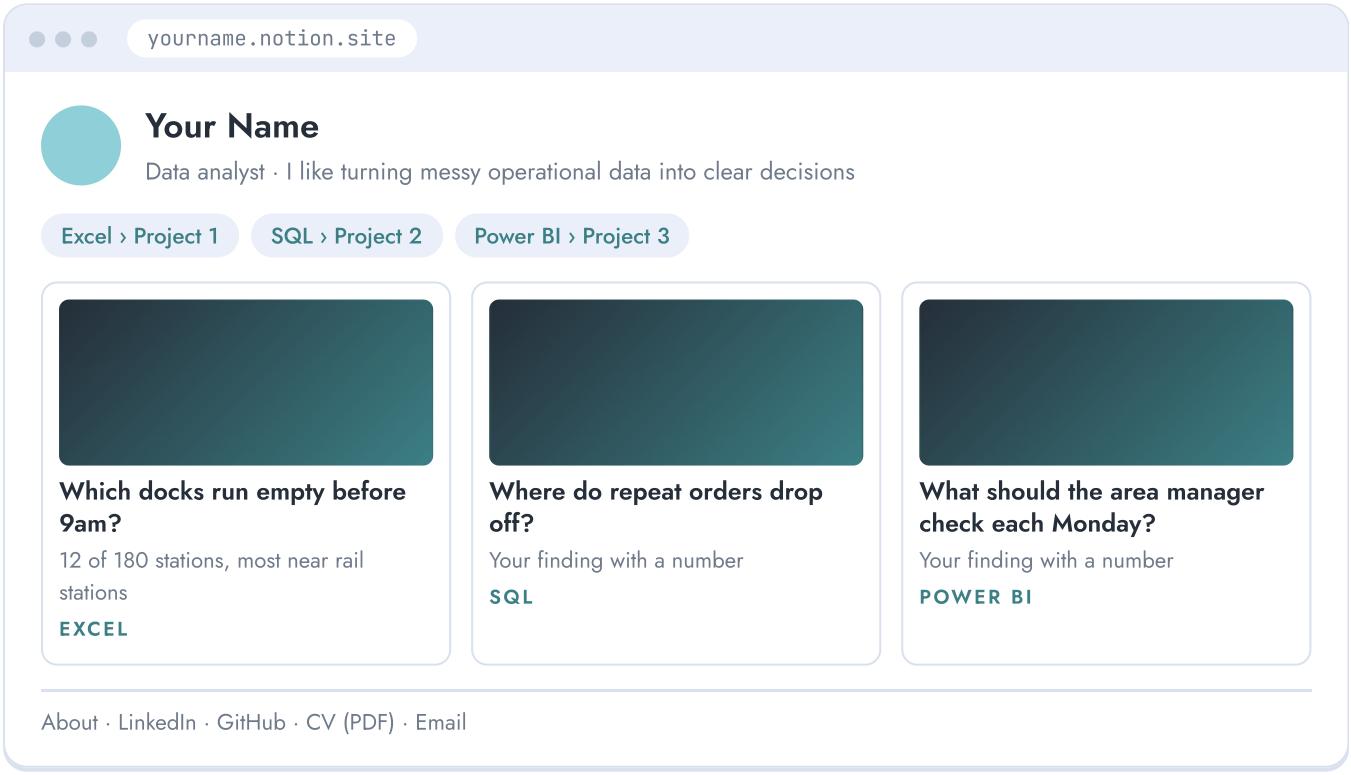
SECTION 05

Build your portfolio hub

Recruiters click links; they do not download files. Put everything behind one public page that opens on a phone. Notion is free, quick and needs no code.

1. **Get the template.** Open the Virtavis portfolio template link and choose **Duplicate**. You need a free Notion account. No Notion? Use the Markdown files in this kit with Google Sites, Carrd or a GitHub Pages site instead.
2. **Write the home page.** Three lines about you, a skills grid that links each skill to the project that proves it, and three project cards.
3. **Fill one case study.** Use the case-study template in section 03. Finish one project properly before you start the next.
4. **Add images, not files.** Paste screenshots of your dashboard, query results and charts. Link out to Tableau Public, GitHub or a video for the full thing.
5. **Publish. Share › Publish**, then switch off editing and comments. Turn off search engine indexing until you are happy with it.
6. **Test it like a recruiter.** Open the link in a private window and on your phone. Every link should open without a sign-in.

WHAT THE HOME PAGE LOOKS LIKE

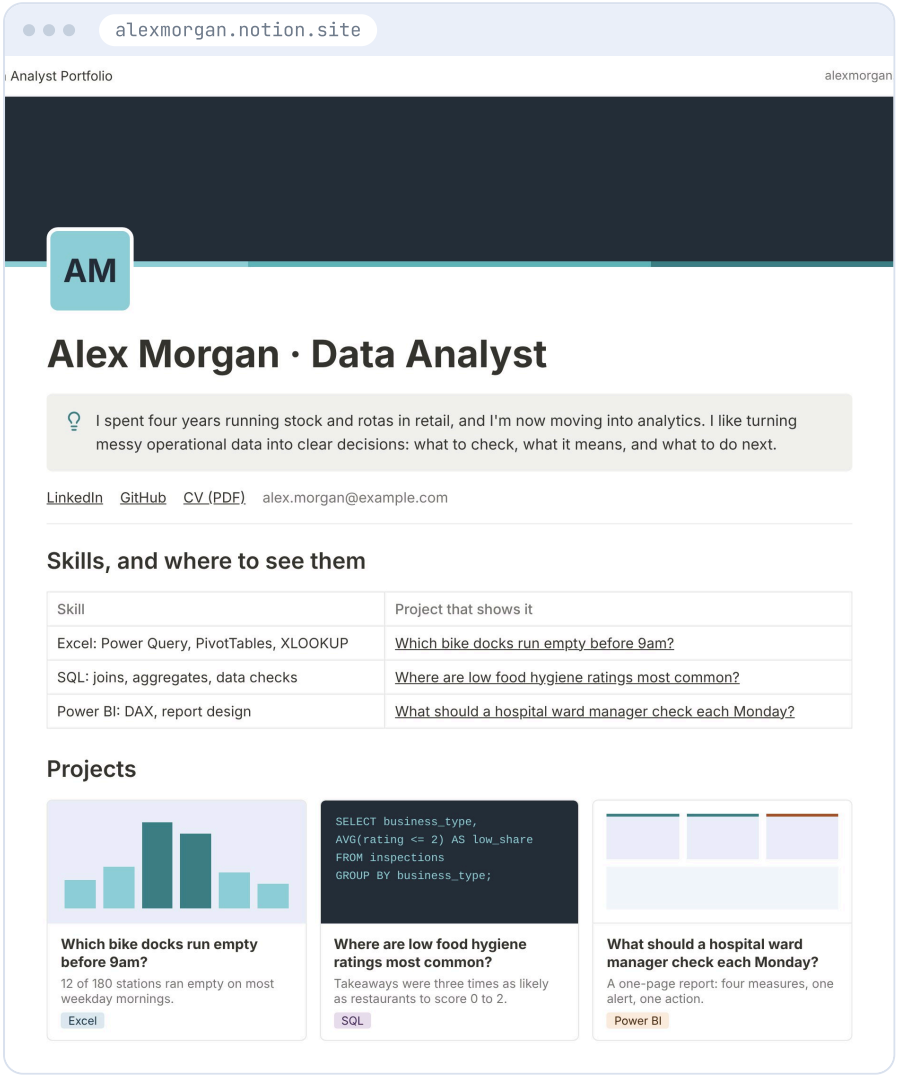


SECTION 06

What it looks like

Here is one example learner, Alex, a retail supervisor moving into data. The same three projects appear on all three platforms, and every page points back to the portfolio hub. The person, projects and figures are illustrative.

NOTION: THE PORTFOLIO HUB



1. **One link for everything**
   This is the link on the CV, the LinkedIn profile and GitHub. It opens on a phone without a sign-in.

2. **Three lines about you**
   Where you are coming from, what role you want and what problems you like.

3. **Skills linked to proof**
   Each skill points to the project that shows it, so nobody has to take your word for it.

4. **Cards that lead with the finding**
   Title as a question, one-line finding with a number, one tool tag.

NOTION: INSIDE A PROJECT PAGE

Each project card on the hub opens a page like this. The top box answers the recruiter in under a minute. Everything below it is for the hiring manager who wants to see how you think.

alexmorgan.notion.site/bike-docks

Analyst / Which bike docks run empty before 9am? alexmorg

Excel · Power Query · PivotTables · Personal project · Sep 2026

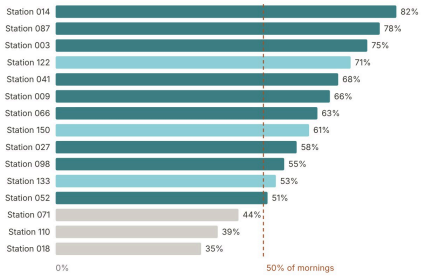
Which bike docks run empty before 9am?

THE SHORT VERSION

Business question	The operations team needs to know which docking stations run out of bikes before 9am on weekdays, so they can decide where the morning van goes first.
Who asked	Operations manager, city bike-hire scheme (realistic scenario)
Key finding	**12 of 180 stations** ran empty on at least half of weekday mornings, and 9 of the 12 are within 500 metres of a mainline station.
Recommendation	Start the van route at those 12 stations and refill them by 7:30. Recheck in four weeks.
Tools and data	Excel (Power Query, PivotTables, XLOOKUP) · public cycle-hire journey data, Jul to Sep · station list with coordinates

Twelve stations ran empty on at least half of weekday mornings

Share of weekday mornings (6am to 9am) with no bikes left, top 15 stations · dark = within 500 m of a mainline station



The data

- Public journey data for one quarter (July to September): 412,000 rows, one row per journey, with start and end station, date and time.
- A station list with ID, name, capacity and coordinates, joined on station ID.

continued

What I cleaned

Problem	What I did	Rows affected
Journeys under a minute that start and end at the same dock	Removed: a bike re-docked, not a trip	2,140
31 station names spelled two ways	Matched on station ID instead of name	9,860
Two weeks of school holidays	Excluded after checking they changed the morning pattern	31,500

What I checked and ruled out

- ☑ **Totals match.** Journeys per day matched the operator's published monthly figure to within 0.5%.
- ☑ **Not the weather.** The 12 stations ran empty on dry and wet mornings alike.
- ☑ **Not one-off events.** A station only counts if it ran empty in at least six separate weeks.

How I got the answer

1. Loaded the three monthly files with Power Query and appended them into one table.
2. Counted departures and arrivals per station for every 15 minutes from 6am to 9am.
3. Estimated bikes left: capacity at 6am, minus departures, plus arrivals. Zero or below counts as empty.
4. Built a PivotTable of empty mornings per station, then used XLOOKUP to add the distance to the nearest mainline station.

At the busiest station, bikes are gone by 8:15

Station 014, average bikes left on a weekday morning (capacity 24)



Limits and next steps

⚠ The data shows journeys, not live dock levels, so "empty" is an estimate. Dock capacity changed at two stations during the quarter. Next, I would test the new van route for four weeks and compare empty mornings before and after.

Download the workbook (OneDrive, view only) · Two-minute walkthrough video · Back to portfolio

Example learner. Projects and figures are illustrative.

1 The short version
Question, who asked, finding, recommendation, tools. Written last, read first.

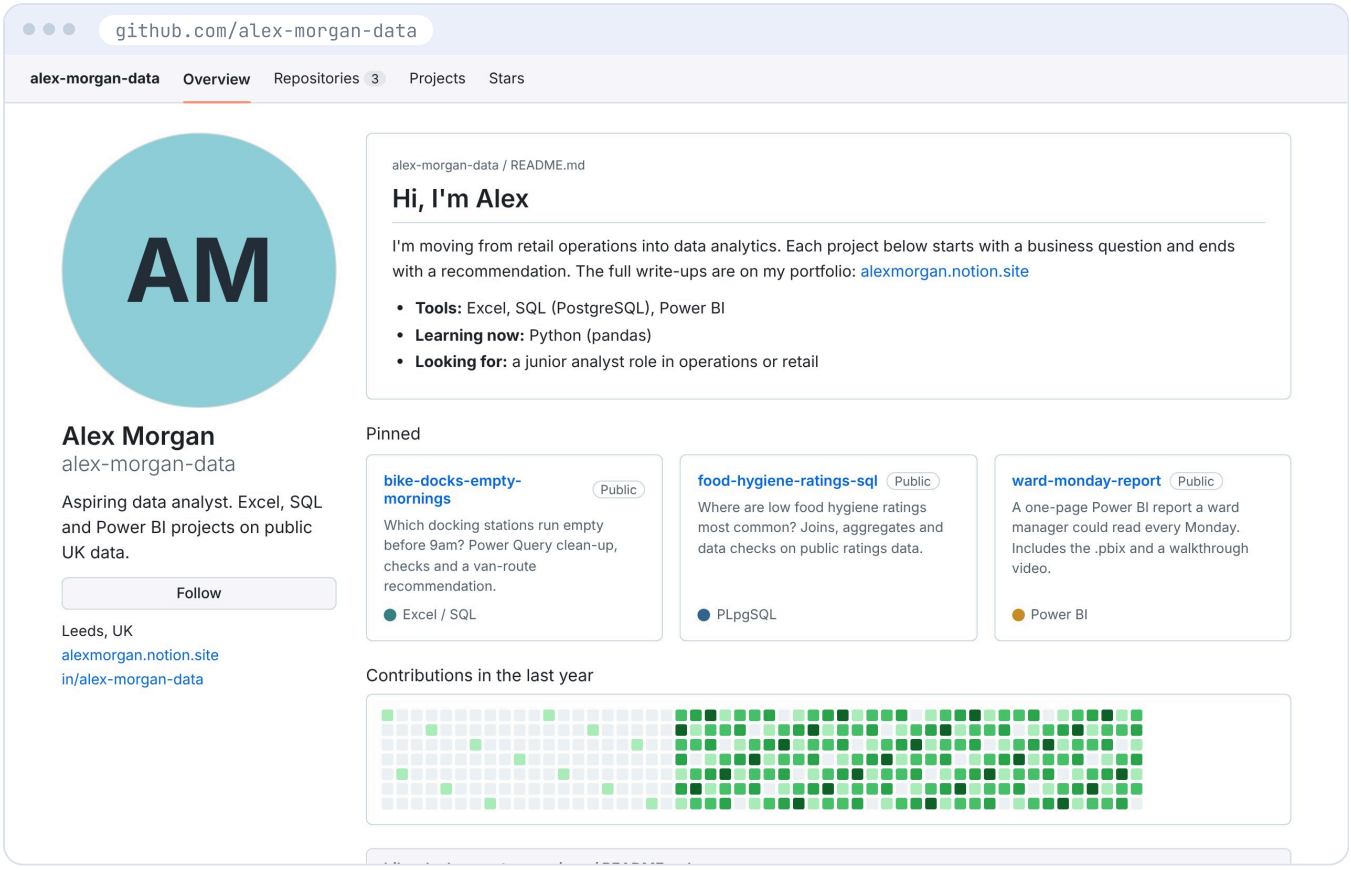
2 One chart with a headline
The chart title says what it shows, and the finding is visible without reading the axis.

3 Cleaning and checks
A small table of problems and fixes, then the checks that make the answer trustworthy.

4 Method, limits, links
Four steps, a supporting chart, what the data cannot tell you, and links to the file and video.

GITHUB: WHERE THE SQL AND CODE LIVE

Optional if you work in Excel and Power BI. Expected once your CV lists SQL or Python. Hiring managers read the README and rarely open the code.



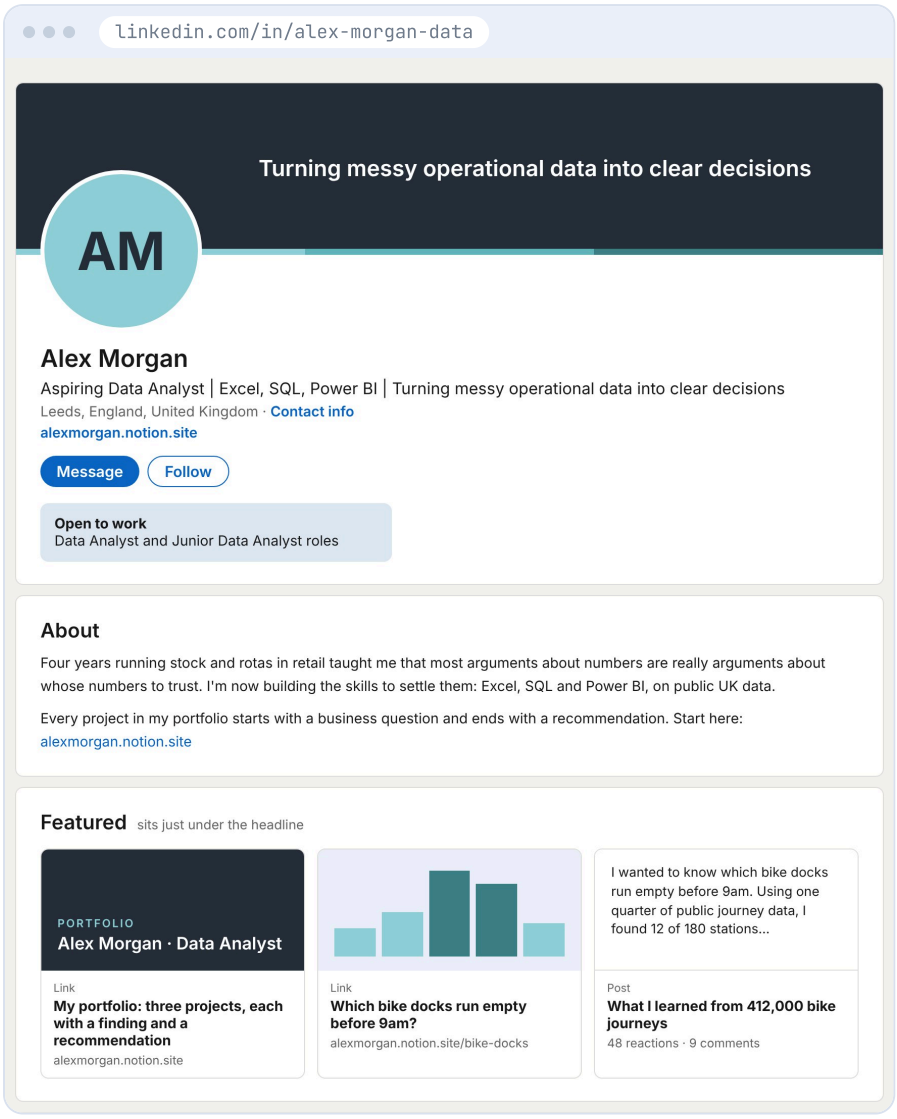
1 Profile README
A short hello that says what the projects are and links back to the Notion page.

2 Three pinned projects
Named in plain words, each with a one-line description. These are what people see first.

3 A project README
Question, finding and recommendation at the top, then how to rerun it. The template is in section 07.

Keep it tidy, not busy
Three finished, well-described repositories beat twenty half-finished ones. The activity grid is nice to have. Nobody hires you for it.

LINKEDIN: THE FIRST THING A RECRUITER SEES



1 Headline and banner
Target role, two or three tools and the problems you like solving. The banner can repeat it.

2 About
Two short paragraphs in your own voice, ending with the portfolio link.

3 Featured
The portfolio, your strongest project and one post about a finding. It sits just under the headline.

4 Projects and certificates
Each project uses the CV bullet formula in section 08. Course certificates go under Licences and certifications.

One story, three places

- The same three projects, with the same titles and the same findings, on every platform.
- Every page links back to the Notion hub, and the hub links out to GitHub and LinkedIn.
- Write it once in the case-study template, then copy the top box into each place.

SECTION 07

Share dashboards and code

Link to the real thing wherever you can. Where you cannot, show it with screenshots and a short video.

Tableau Public FREE

Publish straight from Tableau Public Desktop and paste the link. Recruiters can click and explore without an account.

Power BI LICENCE NEEDED TO PUBLISH

Publish to web needs a work account with a Pro or Premium Per User licence, and your organisation must allow it. Most learners cannot do this for free. Use the fallback below.

Excel FREE

Save to OneDrive, share as "Anyone with the link can view", and put screenshots of the key sheet in your case study.

SQL and Python FREE

One GitHub repository per project with a README at the top. Pin your best three repositories to your profile.

The Power BI fallback

- Two or three clean screenshots of the report pages, at full width, in the case study.
- A two-minute screen recording: what the dashboard is for, how to read it, one insight. Clipchamp (Windows) or QuickTime (Mac) both work. Upload to YouTube as Unlisted.
- The .pbix file in a GitHub repository for anyone who wants to open it.
- A sentence that says why: "Public sharing needs a paid licence, so here is a walkthrough video." Hiring managers know.

README TEMPLATE FOR EACH GITHUB PROJECT · ALSO IN THE KIT AS README_TEMPLATE.MD

```
# Which bike docks run empty before 9am?

**Question:** Which stations run out of bikes before 9am on weekdays?
**Finding:** 12 of 180 stations ran empty on at least half of weekday mornings.
**Recommendation:** Start the morning van route at those 12 stations.

## Data
Public journey data, one quarter, 412,000 rows (one row = one journey).

## What I cleaned and checked
- Removed same-dock journeys under one minute
- Matched stations on ID, not name
- Daily totals checked against the published figure

## Files
- `01_clean.sql`, `02_empty_mornings.sql`
- `analysis.ipynb` (charts and checks)

## How to rerun
1. Download the data from the link above
2. Run the SQL files in order (PostgreSQL 16)
```

SECTION 08

CV and LinkedIn pack

The CV and LinkedIn are read before the portfolio, often by someone who is not technical. Make your projects visible there, in plain English.

THE PROJECT BULLET FORMULA

Answered [question] for [who] **using** [tools and data]; **found** [finding with a number] and **recommended** [action].

BEFORE Created a dashboard in Power BI using DAX and Power Query.

AFTER Built a Power BI dashboard for a bike-hire operations team from one quarter of public journey data; found 12 stations that run empty on most weekday mornings and recommended a new van route.

CV RULES FOR ANALYST PROJECTS

- [ ] Put your portfolio link in the CV header, next to your email and LinkedIn.
- [ ] Add a **Projects** section above older, unrelated jobs. Two or three projects, two lines each.
- [ ] Juniors: aim for one page, two at most. Plain layout, no photo, no skill bars.
- [ ] Say "project" or "course project" honestly. Do not present practice work as paid work.
- [ ] Name the tools in the job advert if you have really used them.

LINKEDIN HEADLINE

[Target role] | [2–3 tools] | [the problems you like solving]

Aspiring Data Analyst | Excel, SQL, Power BI | Turning messy operational data into clear decisions

FEATURED SECTION

It sits just under your headline, so it is one of the first things people see. Add:

- Your portfolio home page (the Notion link)
- Your strongest project, linked directly
- A short post about one finding, with one chart

A project post template

I wanted to know which bike docks run empty before 9am.

Using one quarter of public journey data, I found 12 of 180 stations ran empty on at least half of weekday mornings, most of them near mainline stations.

What I checked first: [one check]
What surprised me: [one thing]
Full write-up: [portfolio link]

Post it once the project is finished, then add it to Featured.

SECTION 09

Interview walkthrough

"Talk me through a project" is one of the most common interview requests. Scrolling a web page in an interview is hard work; six slides are easy. The deck in this kit follows this order.

1
The question
Who asked, what they needed to decide. One sentence on screen.

2
The data
Source, size, what one row means, and the two biggest problems you fixed.

3
What I found
One chart and one sentence with the number in it.

4
What I would do
Your recommendation and who would act on it.

5
What I would check next
Limits, and the next question you would ask.

6
What I learned
One skill and one habit you would keep.

THE TWO-MINUTE TALK TRACK

0:00	The question and who asked it.
0:20	The data and the one cleaning decision that mattered most.
0:50	The finding, with the number.
1:20	What you recommended, and what you would check next.
1:45	What you learned. Then stop and let them ask.

Practise it out loud
Record yourself once on your phone. If you run past two minutes, cut the method, not the finding. Save the deck as a PDF too, so you can attach it to an application or share your screen without editing tools open.



SECTION 10

Pre-send checklist

Run through this list before you put the link on your CV, and again whenever you add a project.

LINKS

- [ ] Every link opens in a private window, with no sign-in
- [ ] Every link works on a phone
- [ ] The portfolio link is in your CV header and on LinkedIn

PROJECTS

- [ ] Three finished projects, each with a different main skill
- [ ] Every project opens with the question, finding and recommendation
- [ ] Every finding has a number in it
- [ ] At least one project uses your own question or your own data
- [ ] No Titanic, Iris or generic superstore data

TRUST

- [ ] Each project says what you cleaned and what you checked
- [ ] Each project says what the data cannot tell you
- [ ] Every number has been checked twice, including anything AI helped with
- [ ] Course and practice projects are labelled honestly

FINISH

- [ ] Spelling checked, with UK or US spelling used consistently
- [ ] Dates, currency and units are consistent
- [ ] A friend outside data can say what each project found after one minute

NEED PROJECTS TO PUT IN IT?

Every Virtavis course ends with a **final project** built on realistic business data. Add your own angle and it is ready for this portfolio.

Start the course ›

SECTION 11 · KEEP GOING

Build the projects that fill it.

A portfolio is only as good as the projects in it. Every Virtavis course puts you inside a business with real requests from colleagues, and ends with a final project you can adapt. Each course has videos, a handbook, quizzes, challenges with model answers and email support.

SIX COURSES, ONE TRACK

Excel for Data Analytics
XLOOKUP, PivotTables and Power Query

SQL for Data Analytics
Queries, joins and KPIs in PostgreSQL

Power BI for Data Analytics
Power Query, DAX and dashboards

Python for Data Analytics
pandas, charts and business insights

Python for Complete Beginners
Code your first real programs

Statistics for Data Analytics
A/B testing and machine learning

BEST VALUE

The Complete Data Analytics Bootcamp

All six courses, the full practice dataset, extra templates and email support for your course work, from **£295**. Six final projects across Excel, SQL, Power BI and Python.

See the Bootcamp › virtavis.com/bootcamp

ALSO FREE AT VIRTAVIS.COM

- Practice dataset with a guide
- Think Like an Analyst in 5 Days (email course)
- The Data Analyst Interview Playbook
- SQL, Excel, DAX, Python and KPI cheat sheets

Get the free starter kit › virtavis.com/free

Prefer to learn with a group? Small live cohorts of 10 to 12 learners are also available. **Enquire at virtavis.com/cohorts.**

VIRTAVIS LEARNING

Check the numbers. Say what they mean.

virtavis.com

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