



Audit Data Analytics

Focus on risks efficiently and effectively

2020-09-23

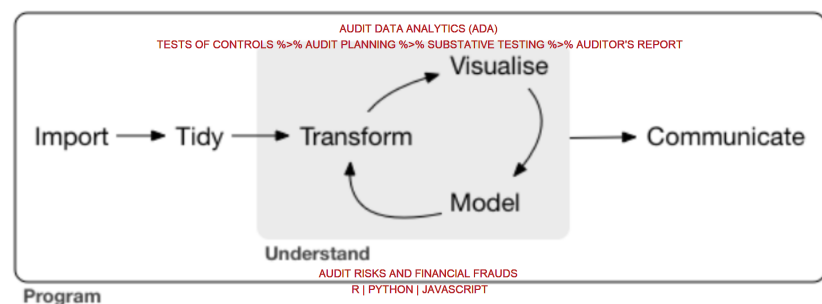


Stewart Li, a qualified accountant, has extensive experience assisting organisations with strengthening internal controls processes, initial public offerings and IFRS reporting standards. He has worked closely with a wide variety of clients in the manufacturing, service and public sectors across the region. He is passionate about utilizing Data Analytics to help clients manage the financial reporting challenges associated with a constantly changing business environment.

🏠 Stewart Li MCom|CA|ACCA
✉ stewardli8@msn.com
🌐 <https://raudit.netlify.com/>
📍 Clementi, Singapore

Accounting professionals tend to work under pressure so that they can cover as much ground as possible. However, tools at their disposal often have very limited power and are unable to optimistically fit their workflow. Furthermore, their work is prone to errors due to too many copy+paste and unreproducibility.

In our view, R is a perfect tool to increase their productivity and conform to their workflow. Data analytics lifecycle described by [R4DS](https://r4ds.had.co.nz/) (<https://r4ds.had.co.nz/>) sensibly matches audit routines. This document is meant to demonstrate the usefulness of R in the field of audit via a specific use case.



RAudit Solution LLP leverages accounting expertise and the power of R to provide excellent consulting services to organisations across a diverse range of sectors. We help organisations like yours become more efficient and effective with auditing and forensic accounting. Contact us today for more about how consulting can help your organisation adapt to a rapidly changing market.

Our consulting will help you with:

- Financial Planning & Analysis;
- Internal Audit;
- External Audit;
- Practices of SOX and FCPA;
- In-house Training;

Training course

This is an example of our training course. See [Github Repo \(https://stewartli.github.io/ada_tutorial/\)](https://stewartli.github.io/ada_tutorial/) for details.

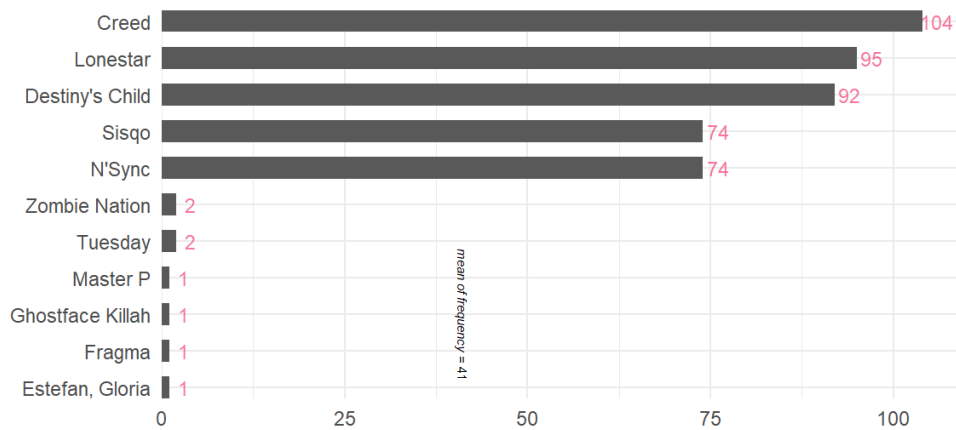
Data cleaning

year	artist	track	genre	date.entered	date.peaked	week	rank	len	date
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	1	78	4	2000-09-23
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	2	63	4	2000-09-30
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	3	49	4	2000-10-07
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	4	33	4	2000-10-14
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	5	23	4	2000-10-21
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	6	15	4	2000-10-28
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	7	7	4	2000-11-04
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	8	5	4	2000-11-11
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	9	1	4	2000-11-18
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	10	1	4	2000-11-25
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	11	1	4	2000-12-02
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	12	1	4	2000-12-09
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	13	1	4	2000-12-16
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	14	1	4	2000-12-23
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	15	1	4	2000-12-30
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	16	1	4	2001-01-06
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	17	1	4	2001-01-13
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	18	1	4	2001-01-20
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	19	1	4	2001-01-27
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	20	2	4	2001-02-03
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	21	3	4	2001-02-10
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	22	7	4	2001-02-17
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	23	10	4	2001-02-24
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	24	12	4	2001-03-03
2000	Destiny's Child	Independent Women Part I	Rock	2000-09-23	2000-11-18	25	15	4	2001-03-10
Note: The first 25 rows of data									

Data munging

artist	track	best_score	best_last	peak
Aguilera, Christina	Come On Over Baby (All I Want Is You)	1	4	best hit
	I Turn To You	3	0	no hit
	What A Girl Wants	1	2	best hit
Destiny's Child	Independent Women Part I	1	11	best hit
	Jumpin' Jumpin'	3	0	no hit
	Say My Name	1	3	best hit
Madonna	American Pie	29	0	no hit
	Music	1	4	best hit
Santana	Maria, Maria	1	10	best hit
Savage Garden	Crash And Burn	24	0	no hit
	I Knew I Loved You	1	4	best hit
Note: The best of five artists				

Artists Frequently **Appear On Billboard** Top 5 and Bottom 5 Artists



RAuidt Solution LLP | Stewart Li

Modeling

	Model 1	Model 2	Model 3
(Intercept)	45.450***	55.351***	-230.451***
	(2.438)	(2.306)	(36.025)
len	1.390**	2.203***	2.805***
	(0.597)	(0.558)	(0.560)
week		-1.149***	-1.255***
		(0.041)	(0.043)
date			0.026***
			(0.003)
R2	0.001	0.128	0.138
R2 Adj.	0.001	0.128	0.138
AIC	50788.3	50067.8	50007.0
BIC	50808.0	50094.1	50039.9
Log.Lik.	-25391.145	-25029.919	-24998.485
F	5.422	389.856	284.016
* p < 0.1, ** p < 0.05, *** p < 0.01			

©RAudit Solution LLP All rights reserved.
China | Singapore | New Zealand

Disclaimer: The document proudly produced by R is designed to be a general representation of the projects and is not in any way designed to represent views from any particular aspects. Views may be obstructed as some procedures otherwise are required by regulations under a certain circumstance. Contact RAudit Solution LLP for consulting services at your specific direction.

