



DURATION

POUTCOME

CONTACT

HOUSIM

MONTH

PREVIOUS

bin1 bin2

bin3

bin4

unknown

failure other

success

telephone

cellular

Marketing Analytics

Taking Your Business Process From **Excel to R**
and the **Correlation Funnel**



Matt Dancho & David Curry
Business Science Learning Lab



Learning Lab Structure

- **Presentation**
(50 Minutes)
- **Q&A**
(10 Minutes)

Your Hosts!



Matt Dancho

Founder of Business Science, Matt designs and executes educational courses and workshops that deliver immediate value to organizations. His passion is up-leveling future data scientists coming from unconventional backgrounds.



David Curry

Founder of Sure Optimize, David works with businesses to help improve website performance and SEO using data science. His passion is ethical Machine Learning initiatives.



Agenda: Marketing Analytics with

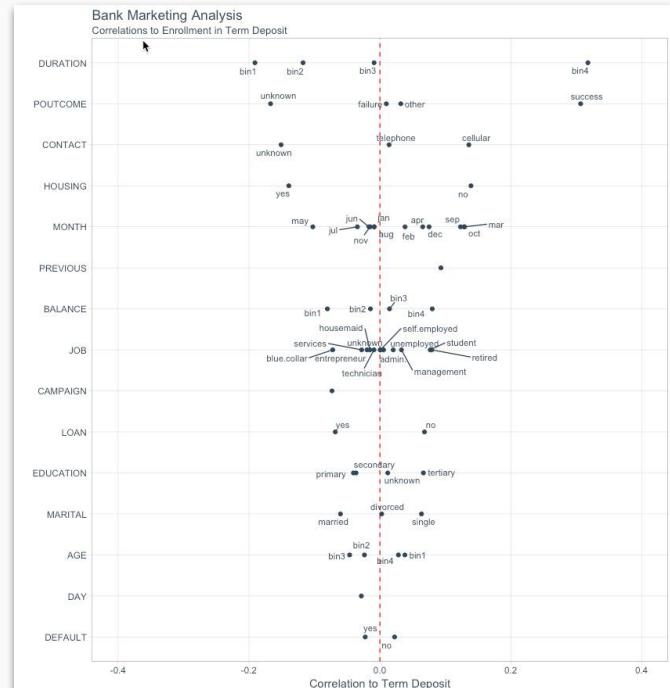
- Marketing Case Study
 - Business Process in Excel
 - Issues with VLOOKUP
 - Issues with Analysis



- Conversion to R (Live Code)
 - Fast & Efficient Data Analysis
 - Correlation Funnel - Cut straight to insights



- The Plan



Business Process in Excel



- Walkthrough:
 - Business Problem
 - Business Process
- **Issue #1:** Joining Data (VLOOKUP)
- **Issue #2:** Blindly Performing Exploratory Analysis

bank_term_deposit_marketing_analysis

File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

=VLOOKUP(\$A21,'MARKETING_HISTORY'!\$A\$2:\$I\$4521,\$M\$7, FALSE)

ID	CLIENT_INFO			LOAN_HISTORY				MARKETING_HISTORY								
	2 AGE	3 JOB	4 MARITAL	5 EDUCATION	2 DEFAULT	3 BALANCE	4 HOUSING	5 LOAN	2 CONTACT	3 DAY	4 MONTH	5 DURATION	6 CAMPAIGN	7 PDAYS	8 PREVIOUS P	
2836	58	management married	married	tertiary	no	2143	yes	no	unknown	5	may	261	1	-1	0	ut
2837	44	technician	single	secondary	no	29	yes	no	unknown	5	may	151	1	-1	0	ut
2838	33	entrepreneur	married	secondary	no	2	yes	yes	unknown	5	may	76	1	-1	0	ut
2839	47	blue-collar	married	unknown	no	1506	yes	no	unknown	5	may	92	1	-1	0	ut
2840	33	unknown	single	unknown	no	1	no	no	unknown	5	may	198	1	-1	0	ut
2841	35	management	married	tertiary	no	231	yes	no	unknown	5	may	139	1	-1	0	ut
2842	28	management	single	tertiary	no	447	yes	yes	unknown	5	may	217	1	-1	0	ut
2843	42	entrepreneur	divorced	tertiary	yes	2	yes	no	unknown	5	may	380	1	-1	0	ut
2844	58	retired	married	primary	no	121	yes	no	unknown	5	may	50	1	-1	0	ut
2845	43	technician	single	secondary	no	593	yes	no	unknown	5	may	55	1	-1	0	ut
2846	41	admin.	divorced	secondary	no	270	yes	no	unknown	5	may	222	1	-1	0	ut
2847	29	admin.	single	secondary	no	390	yes	no	unknown	5	may	137	1	-1	0	ut
2848	53	technician	married	secondary	no	6	yes	no	unknown	5	may	517	1	-1	0	ut
2849	58	technician	married	secondary	no	71	yes	no	unknown	5	may	71	1	-1	0	ut
2850	57	services	married	secondary	no	162	yes	no	unknown	5	may	174	1	-1	0	ut
2851	51	retired	married	primary	no	229	yes	no	unknown	5	may	353	1	-1	0	ut
2852	45	admin.	single	unknown	no	13	yes	no	unknown	5	may	98	1	-1	0	ut
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2854	60	retired	married	primary	no	60	yes	no	unknown	5	may	219	1	-1	0	ut
2855	33	services	married	secondary	no	0	yes	no	unknown	5	may	54	1	-1	0	ut
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2857	56	management	married	tertiary	no	779	yes	no	unknown	5	may	164	1	-1	0	ut
2858	32	blue-collar	single	primary	no	23	yes	yes	unknown	5	may	160	1	-1	0	ut

Business Process Conversion to

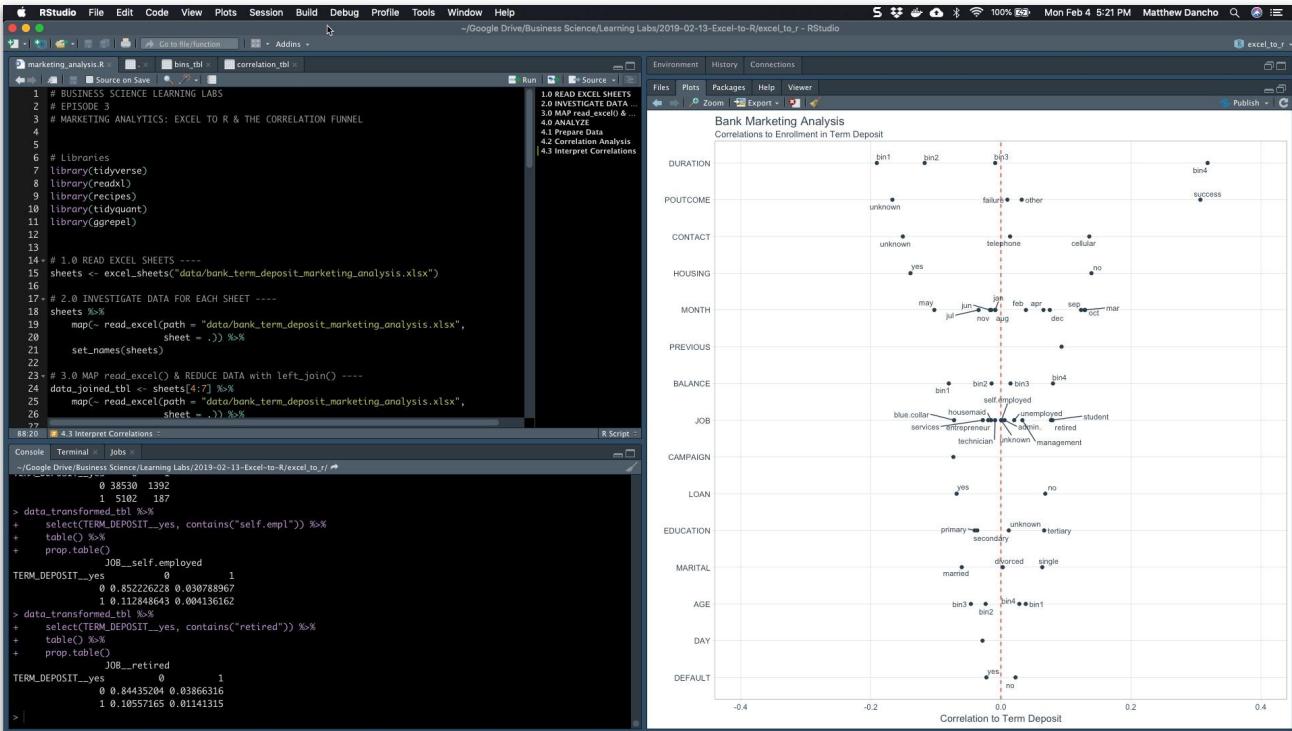


● Live Coding

● Focus #1: Correlation

● Focus #2:

- Exploration
- Strategy
- Reporting results



The Plan

THE PLAN



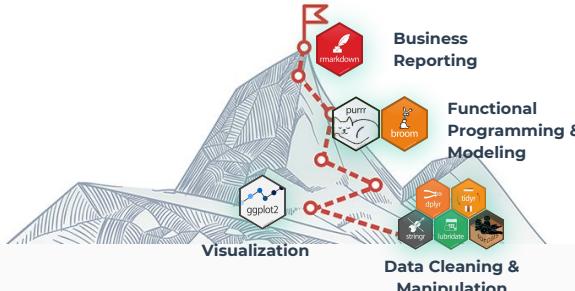
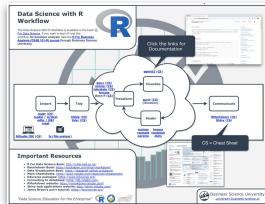
Business Analysis with R (DS4B 101-R)

Data Science For Business with R (DS4B 201-R)

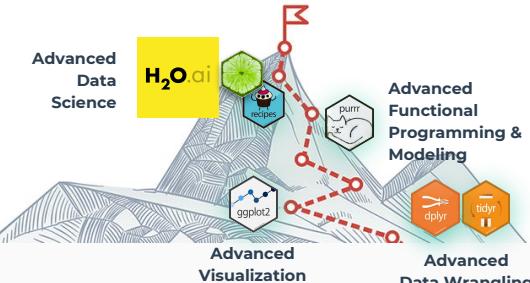
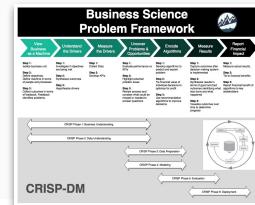
R Shiny Web Apps For Business (DS4B 301-R)

Project-Based Courses with Business Application

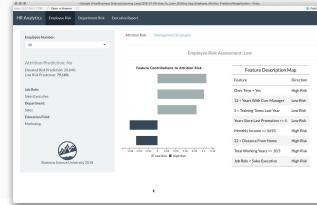
Data Science Foundations
7 Weeks



Machine Learning & Business Consulting
10 Weeks



Web Application Development
6 Weeks





THE RESULT



Business Analysis with R

(DS4B 101-R)

7 WEEKS



Data Science For Business with R

(DS4B 201-R)

10 WEEKS



R Shiny Web Apps For Business

(DS4B 301-R)

6 WEEKS

23 WEEKS!
(OR LESS)



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THE BONUS



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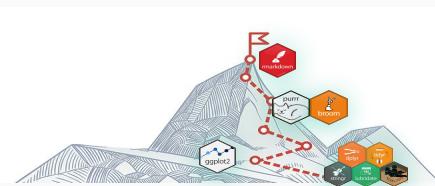
Business Analysis with R
(DS4B 101-R)

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