

Cleaning Up and Visualizing My Workout Data With JMP®

Shannon Conners, PhD
JMP, SAS

Abstract

I began tracking weight training workouts in notebooks in middle school. However, training notes did not give me much insight into my patterns over the years until I began to import my data into JMP. I started in early 2015 by entering data from 14 of the past 17 Januaries. The boredom of manual data entry quickly drove me to investigate new tracking tools! I first adopted the Full Fitness tracking app, then the Push Strength weight training sensor band and app. Both allow me to record my workout details on my phone during a workout and export my data directly to CSV for import into JMP.

Whether collated from my notebooks, exported from Full Fitness, or collected with my Push band, my weight training data tables have presented challenges common to many high dimensional data sets. I have turned to JMP platforms I know and love to help clean up, categorize, and visualize aspects of my workout history. I used the JMP 12 Recode platform to combine replicate exercise names and categorize exercises by primary body part. I created a custom set of female muscle shape files and used graphs including these shapes as filters for other summary graphs, leveraging the new selection filter feature added in JMP 12.

Click pictures to zoom



Objectives

- Create JMP tables of historical training data
- Export workout data files from Push web interface
- Import workout data into JMP
- Consolidate duplicate exercise names
- Categorize exercises by primary body part worked
- Explore and visualize workouts over the years

Data Files

- Excel workbooks from Full Fitness and Push
 - Imported an example of each sheet interactively to create a JSL template
 - Borrowed an import and concatenation loop idea from a SESUG paper by Michael Hecht ²

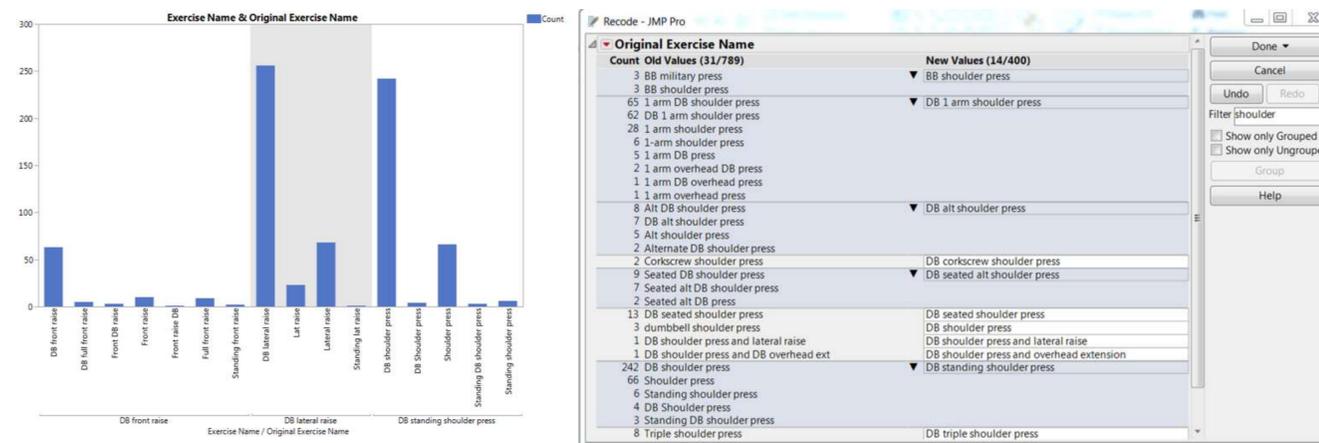
Date	Exercise	Set	Weight	Reps	Notes
10/13/1998	Legs and Abs	3	70 lb	13	
10/13/1998	Legs and Abs	4	70 lb	13	
10/13/1998	Legs and Abs	5	70 lb	13	
10/13/1998	Legs and Abs	6	70 lb	13	
10/13/1998	Legs and Abs	7	70 lb	13	
10/13/1998	Legs and Abs	8	70 lb	13	
10/13/1998	Legs and Abs	9	70 lb	13	
10/13/1998	Legs and Abs	10	70 lb	13	
10/13/1998	Legs and Abs	11	70 lb	13	
10/13/1998	Legs and Abs	12	70 lb	13	
10/13/1998	Legs and Abs	13	70 lb	13	
10/13/1998	Legs and Abs	14	70 lb	13	
10/13/1998	Legs and Abs	15	70 lb	13	
10/13/1998	Legs and Abs	16	70 lb	13	
10/13/1998	Legs and Abs	17	70 lb	13	
10/13/1998	Legs and Abs	18	70 lb	13	
10/13/1998	Legs and Abs	19	70 lb	13	
10/13/1998	Legs and Abs	20	70 lb	13	
10/13/1998	Legs and Abs	21	70 lb	13	
10/13/1998	Legs and Abs	22	70 lb	13	
10/13/1998	Legs and Abs	23	70 lb	13	

- Excel workbooks of historical weight training data

Date	Workout	Exercise Name	Primary Body Part	Body Zone	DB or BB Weight	Reps	# DBs	# Sets	Workout Length	Total Weight Lifted	Start Time	End Time
10/13/1998	Legs and Abs	Leg press	Quadriceps	Lower body	50	20	1	1	1:10	1000	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Leg press	Quadriceps	Lower body	70	20	1	4	1:10	5600	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Leg extension	Quadriceps	Lower body	20	20	1	1	1:10	400	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Leg extension	Quadriceps	Lower body	30	20	1	4	1:10	2400	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Machine leg curl	Hamstrings	Lower body	40	25	1	1	1:10	1000	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Machine leg curl	Hamstrings	Lower body	30	20	1	4	1:10	2400	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Call raise	Calves	Lower body	60	20	1	5	1:10	6000	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Machine glute raise	Glutes	Lower body	30	15	2	1	1:10	900	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Machine glute raise	Glutes	Lower body	20	20	2	1	1:10	800	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Ab machine	Abs	Core	40	25	1	1	1:10	1000	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Ab machine	Abs	Core	55	25	1	1	1:10	1375	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	Ab machine	Abs	Core	70	25	1	1	1:10	1750	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	BW situp	Abs	Core	1	50	1	1	1:10	50	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	BW side crunch	Abs	Core	1	25	2	1	1:10	50	9:35 AM	10:45 AM
10/13/1998	Legs and Abs	BW single leg lift	Abs	Core	1	25	2	1	1:10	50	9:35 AM	10:45 AM
10/14/1998	Back and Abs	DB bent row	Back	Upper body	12	15	2	1	1:15	360	8:05 PM	9:20 PM
10/14/1998	Back and Abs	DB bent row	Back	Upper body	20	15	2	2	1:15	1200	8:05 PM	9:20 PM
10/14/1998	Back and Abs	DB bent row	Back	Upper body	15	15	2	2	1:15	900	8:05 PM	9:20 PM
10/14/1998	Back and Abs	Machine pulldown	Back	Upper body	40	15	1	1	1:15	600	8:05 PM	9:20 PM
10/14/1998	Back and Abs	Machine pulldown	Back	Upper body	60	15	1	4	1:15	3600	8:05 PM	9:20 PM
10/14/1998	Back and Abs	Cable row	Back	Upper body	40	15	1	1	1:15	600	8:05 PM	9:20 PM

Data Preparation

- I entered my historical workout data in an Excel workbook because of the convenience presented by the Excel auto-complete, then imported the tables into JMP.
- I used the JMP 12 Recode platform to standardize duplicate exercise names.
- I also used Recode to create categories for exercises to indicate primary body part worked.
- I saved groupings as scripts that reload into Recode dialog to permit updates for new data.



- I created formula columns by right clicking on Date and choosing New Formula Column.
- I added date variations like Month Abbr and Year.
- I created a formula column to calculate Total Weight Lifted (TWL) = Sum(Weight used) x # of Reps x # of Sets
- Example calculations for two exercises are shown below.



DB Chest Press > Chest > Upper Body
TWL = 60 lb. x 12 reps x 4 sets = 2880 lbs.

Click pictures to zoom



DB Hammer Curl > Biceps > Upper Body
TWL = 30 lb. x 12 reps x 4 sets = 1440 lbs.



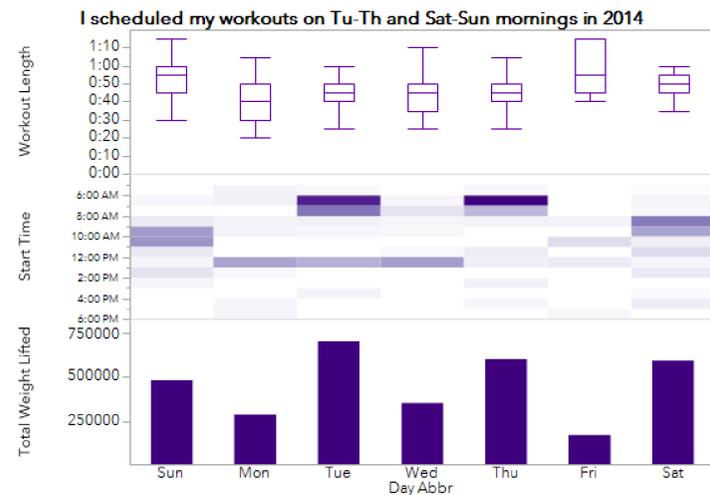
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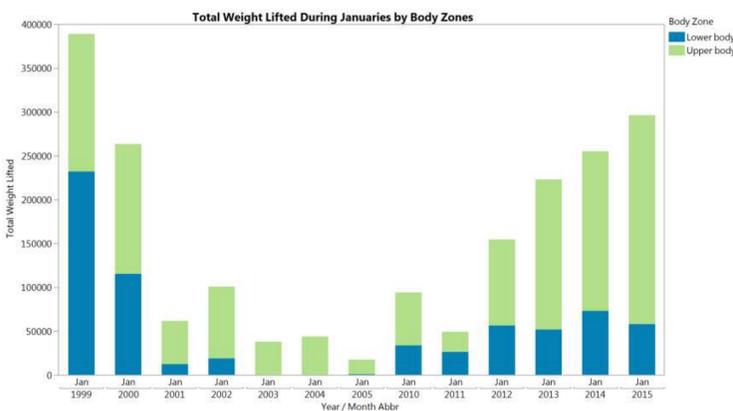
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Exploring Historical Workout Patterns

There are endless possibilities for exploring workout data in JMP!



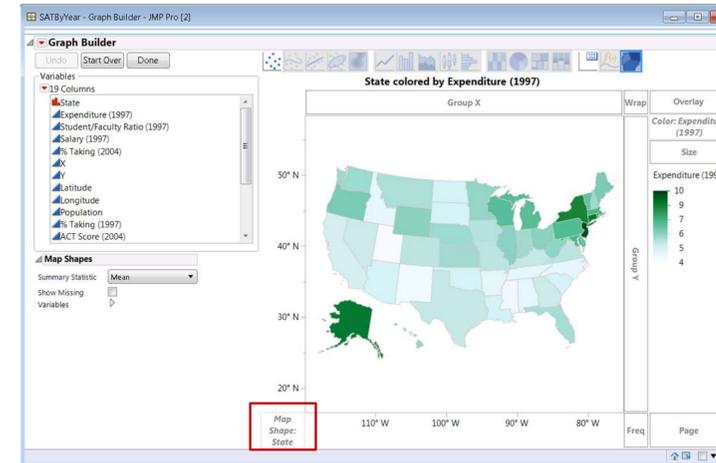
- I track the starting and ending time of my workouts and their durations.
- I created a multi-element Graph Builder chart to capture my workout patterns during 2014, when I largely adhered to a set schedule.
- The top box plot captured duration information.
- The middle heat map showed that I usually started my scheduled workouts early Tuesday and Thursday morning, but slightly later when working out on the weekend. The heat map also revealed that I occasionally worked Mon.-Wed. at lunchtime.
- The bottom bar graph shows that the sum of the weight I lifted was greatest on my scheduled days.



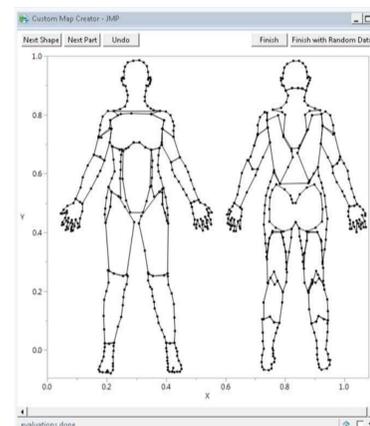
- I entered my workout data from 14 of the last 17 Januaries into JMP and created a bar chart with body zone as an overlay variable in Graph Builder.
- In January 1999 and 2000, I lifted the most weight but focused more of my heavy lifting on lower body exercises performed in a gym (leg and calf presses).
- I did short workouts at home for many years, focusing on upper body exercises almost exclusively.
- In recent years, I have returned to longer workouts and focus my lifting efforts on upper body exercises.

Click any picture to zoom

The (Custom) Map that Leads to Me



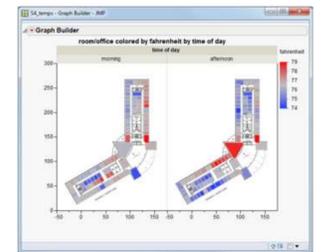
Graph Builder has a Map Shapes drop zone which recognizes common shape names found in built-in maps and can also recognize shape names from custom maps.



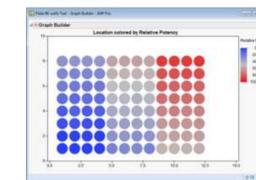
Click any picture to zoom



Author: Xan Gregg
Zip Code Map



Author: Audrey Shull
Building Floor Map

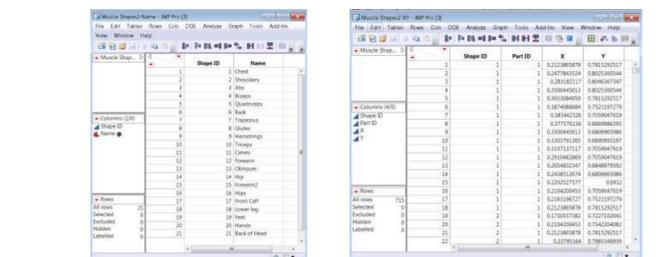


Author: Mark Bailey
Microtiter Plate

Entries on the JMP blog cover several different applications for large and small-scale custom maps.

I used the Custom Map Creator add-in to create a set of custom female muscle map shape files. This add-in can be downloaded from the JMP User Community here: <https://community.jmp.com/docs/DOC-6218>.

Once downloaded and opened in JMP, the add-in installs into Addins > Map Shapes > Custom Map Creator.



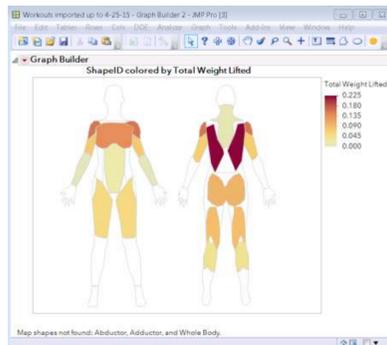
The Custom Map Creator creates a pair of files as you click to define shapes. One file defines shape names and the other lists the X-Y coordinates which define shape outlines. These files must be saved in your user Maps directory.

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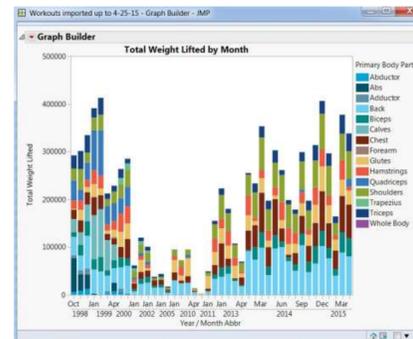
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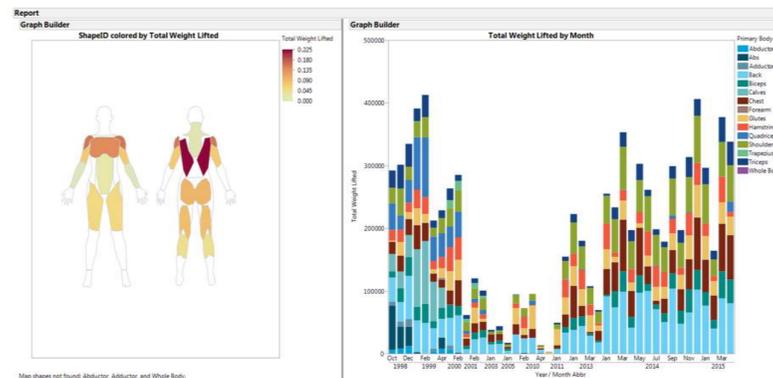
Using My Custom Shapes in a Dashboard



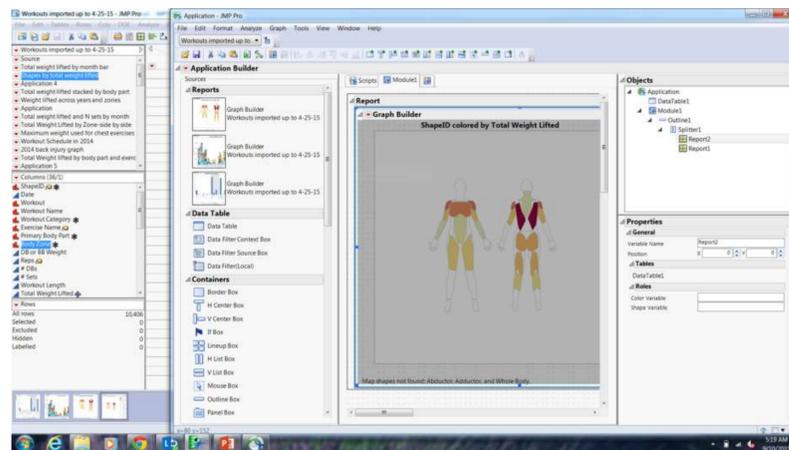
First, I created a graph that overlaid total weight lifted information on my body shapes for all workouts.



Second, I created a stacked bar graph of total weight lifted for all body parts.



I checked the boxes at the bottom of the two reports and chose **Combine Windows** to make a combined report, shown here.



From the red triangle in the combined report, I chose **Edit Application** and right-clicked on the graph I wanted to use as a filter. I chose **Use as Selection Filter** from the right click menu, then clicked the red triangle to **Run** the application.

Learning from Past Mistakes

I track each of my workouts out of longtime habit. In addition to keeping me focused on my workout plan, I find it motivating to look back at my past data. Moving my workout data into JMP has helped me begin to compare the exercise composition and total weight I lifted during specific individual workouts and different 12-week workout programs.

Over the past few years, I have developed a much better appreciation of how my past and present workout patterns differed. In the past, I lifted more total pounds during heavy leg press and calf press exercises than upper body exercises, but now lower body exercises account for a much smaller fraction of total pounds lifted.

Perhaps most interestingly, my data revealed certain problematic workout patterns that occurred just prior to injuries that negatively impacted my training. For example, a pattern of steadily increasing my weight and volume on chest exercises contributed to a lower back injury I experienced in 2014. Similarly, increasing the weight I use on certain back exercises like lat pull-downs appears to contribute to flare-ups of a chronic issue with tightness in my upper back. I have since adjusted my workout patterns to reduce my chances of injuries.

Clicking on individual body areas in my body shape filter reveals how the total weight lifted for each part has changed over the years.



I can create even more complex dashboards to drill down and see the maximum weight and total weight lifted for each exercise. This helps me understand which exercises contributed most to my lifting volume over the years.

References

1 Hecht, Michael. "From Raw Data to Beautiful Graph using JSL." Paper, SESUG 2012. <http://analytics.ncsu.edu/sesug/2013/JMP-02.pdf>

Historical workout data



	Date	Workout	Exercise Name	Primary Body Part	Body Zone	DB or BB Weight	Reps	# DBs	# Sets	Workout Length	Total Weight Lifted	Start Time	End Time
3	10/13/1998	Legs and Abs	Leg press	Quadriceps	Lower body	50	20	1	1	1:10	1000	9:35 AM	10:45 AM
4	10/13/1998	Legs and Abs	Leg press	Quadriceps	Lower body	70	20	1	4	1:10	5600	9:35 AM	10:45 AM
5	10/13/1998	Legs and Abs	Leg extension	Quadriceps	Lower body	20	20	1	1	1:10	400	9:35 AM	10:45 AM
6	10/13/1998	Legs and Abs	Leg extension	Quadriceps	Lower body	30	20	1	4	1:10	2400	9:35 AM	10:45 AM
7	10/13/1998	Legs and Abs	Machine leg curl	Hamstrings	Lower body	40	25	1	1	1:10	1000	9:35 AM	10:45 AM
8	10/13/1998	Legs and Abs	Machine leg curl	Hamstrings	Lower body	30	20	1	4	1:10	2400	9:35 AM	10:45 AM
9	10/13/1998	Legs and Abs	Calf raise	Calves	Lower body	60	20	1	5	1:10	6000	9:35 AM	10:45 AM
10	10/13/1998	Legs and Abs	Machine glute raise	Glutes	Lower body	30	15	2	1	1:10	900	9:35 AM	10:45 AM
11	10/13/1998	Legs and Abs	Machine glute raise	Glutes	Lower body	20	20	2	1	1:10	800	9:35 AM	10:45 AM
12	10/13/1998	Legs and Abs	Ab machine	Abs	Core	40	25	1	1	1:10	1000	9:35 AM	10:45 AM
13	10/13/1998	Legs and Abs	Ab machine	Abs	Core	55	25	1	1	1:10	1375	9:35 AM	10:45 AM
14	10/13/1998	Legs and Abs	Ab machine	Abs	Core	70	25	1	1	1:10	1750	9:35 AM	10:45 AM
15	10/13/1998	Legs and Abs	BW situp	Abs	Core	1	50	1	1	1:10	50	9:35 AM	10:45 AM
16	10/13/1998	Legs and Abs	BW side crunch	Abs	Core	1	25	2	1	1:10	50	9:35 AM	10:45 AM
17	10/13/1998	Legs and Abs	BW single leg lift	Abs	Core	1	25	2	1	1:10	50	9:35 AM	10:45 AM
18	10/14/1998	Back and Abs	DB bent row	Back	Upper body	12	15	2	1	1:15	360	8:05 PM	9:20 PM
19	10/14/1998	Back and Abs	DB bent row	Back	Upper body	20	15	2	2	1:15	1200	8:05 PM	9:20 PM
20	10/14/1998	Back and Abs	DB bent row	Back	Upper body	15	15	2	2	1:15	900	8:05 PM	9:20 PM
21	10/14/1998	Back and Abs	Machine pulldown	Back	Upper body	40	15	1	1	1:15	600	8:05 PM	9:20 PM
22	10/14/1998	Back and Abs	Machine pulldown	Back	Upper body	60	15	1	4	1:15	3600	8:05 PM	9:20 PM
23	10/14/1998	Back and Abs	Cable row	Back	Upper body	40	15	1	1	1:15	600	8:05 PM	9:20 PM



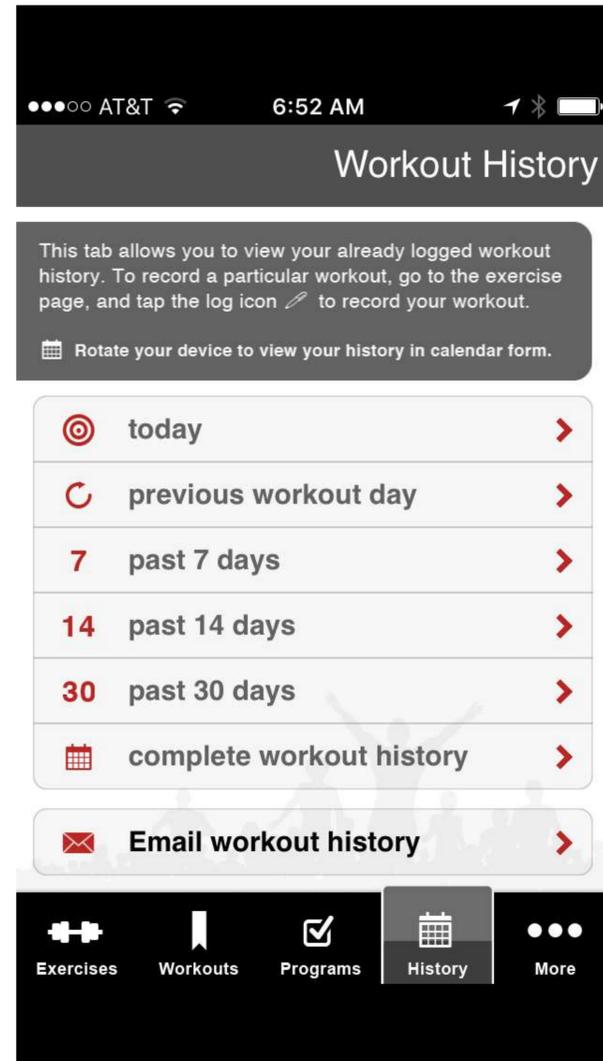
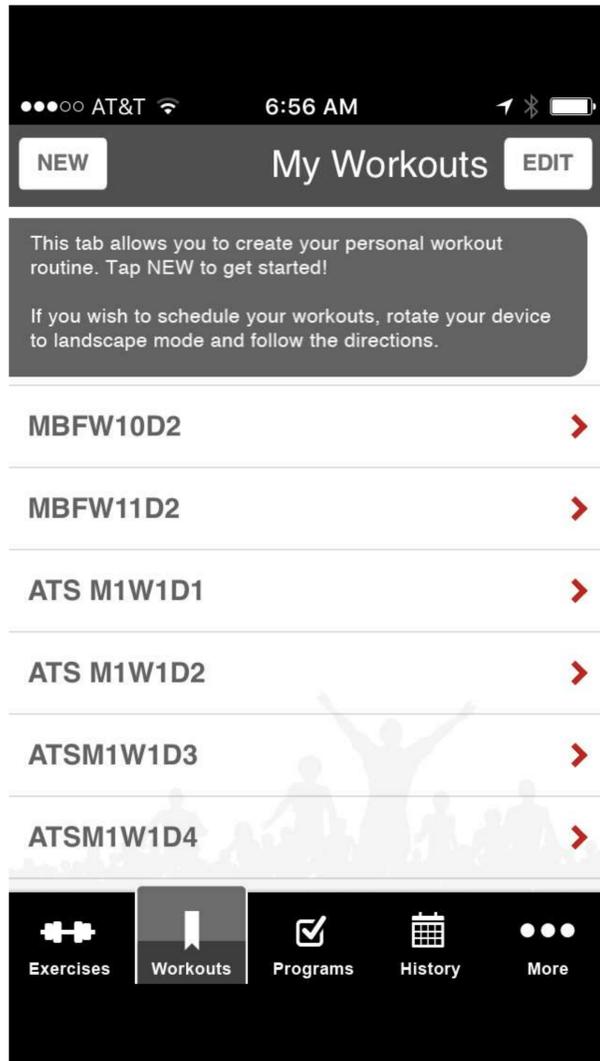
When I entered data from my notebook, I included one row for each unique weight-rep-set combination. Workout metadata was repeated for each row.

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Full Fitness iPhone App

Full Fitness exports data with one row for each set in the workout. Workout metadata is repeated for each row. Although present in the app, the workout name does not export in the CSV table and needs to be added manually.



Date	Exercise	Set	Weight	Reps	Notes
5/4/2015 ...	cable seated close row	1	70 lb	13	
5/4/2015 ...	cable seated close row	2	70 lb	13	
5/4/2015 ...	cable seated close row	3	70 lb	13	
5/4/2015 ...	rear lateral raise	1	12.5 lb	13	
5/4/2015 ...	rear lateral raise	2	12.5 lb	13	
5/4/2015 ...	rear lateral raise	3	12.5 lb	13	
5/4/2015 ...	incline hammer curl	1	20 lb	10	
5/4/2015 ...	incline hammer curl	2	20 lb	10	
5/4/2015 ...	incline hammer curl	3	20 lb	10	
5/4/2015 ...	front plate raise	1	25 lb	13	
5/4/2015 ...	front plate raise	2	25 lb	13	
5/4/2015 ...	front plate raise	3	25 lb	13	
5/4/2015 ...	barbell bench press	1	95 lb	8	
5/4/2015 ...	barbell bench press	2	100 lb	7	
5/4/2015 ...	barbell bench press	3	100 lb	7	
5/4/2015 ...	lying triceps extension	1	17.5 lb	10	
5/4/2015 ...	lying triceps extension	2	20 lb	10	
5/4/2015 ...	lying triceps extension	3	20 lb	10	standing overhead
5/4/2015 ...	upright row	1	15 lb	13	
5/4/2015 ...	upright row	2	17.5 lb	13	
5/4/2015 ...	upright row	3	17.5 lb	13	
5/4/2015 ...	barbell bent-over row	1	60 lb	13	
5/4/2015 ...	barbell bent-over row	2	80 lb	10	
5/4/2015 ...	barbell bent-over row	3	80 lb	10	
5/4/2015 ...	cable triceps overhead extension	1	60 lb	15	
5/4/2015 ...	cable triceps overhead extension	2	70 lb	13	
5/4/2015 ...	cable triceps overhead extension	3	80 lb	13	
5/4/2015 ...	cable face pull	1	90 lb	15	
5/4/2015 ...	cable face pull	2	100 lb	15	
5/4/2015 ...	cable face pull	3	100 lb	15	
5/4/2015 ...	dumbbell incline bench press	1	35 lb	13	
5/4/2015 ...	dumbbell incline bench press	2	40 lb	10	
5/4/2015 ...	dumbbell incline bench press	3	40 lb	10	

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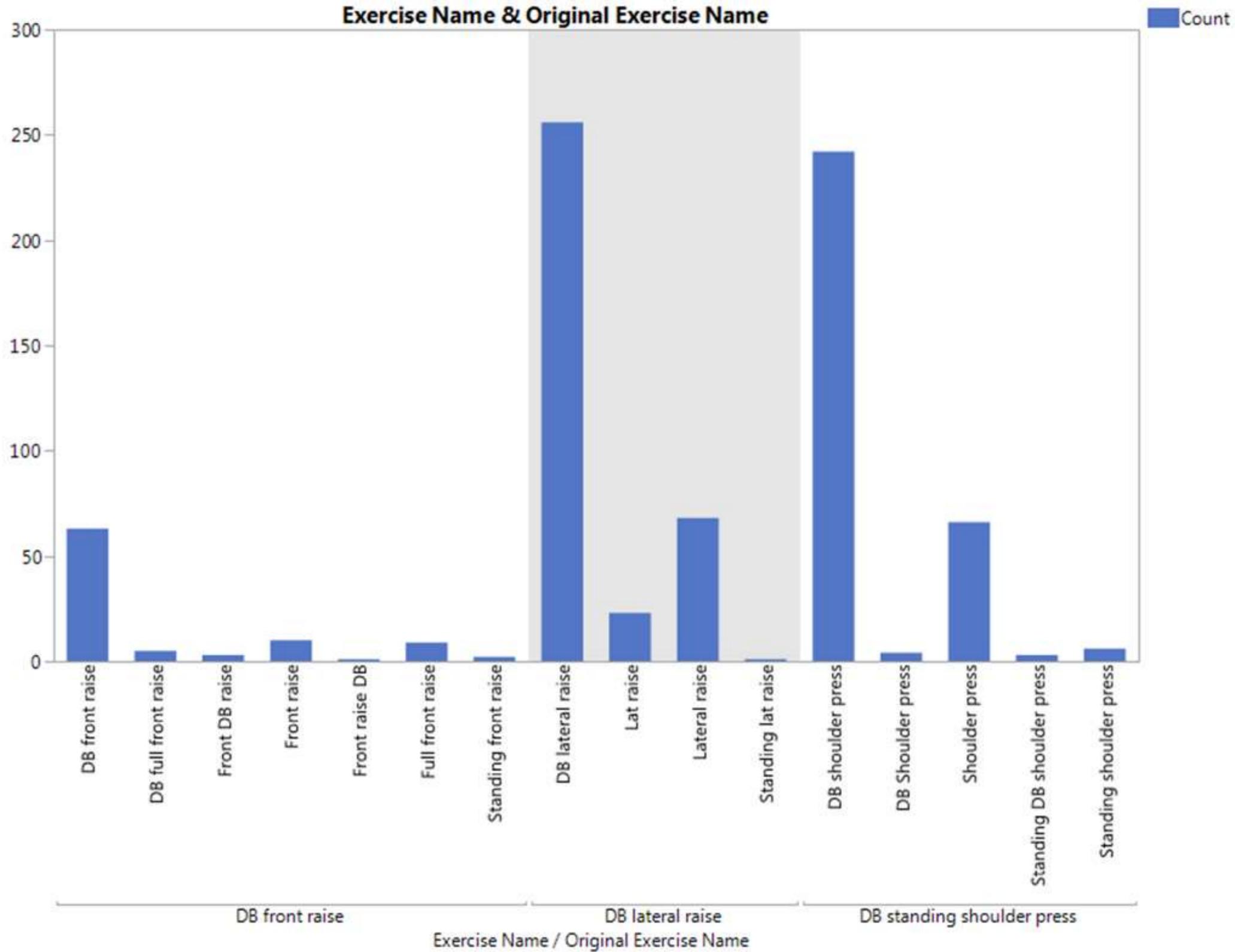
Push Strength Band and iPhone App

Push exports data with one row for each rep level, including weight, rep, velocity and power data. I add variables found in the file name and timing information before importing tables into JMP.

Workout Name	Date	Start Time	End Time	Duration	Work Time	Exercise Name	Load (lbs)	Rep Number	Average Force(N)	Average Power(w)	Average Velocity(m/s)
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	1	838.77...	295.26...	0.86319573
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	2	850.65...	294.13...	0.89242415
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	3	879.15...	312.81...	0.97056492
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	4	865.26...	311.21...	0.91154748
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	5	856.17...	314.08...	0.88181938
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	6	860.75...	308.83...	0.8712648
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	7	855.14...	286.89...	0.86204279
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	8	846.99...	290.60...	0.87965838
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	9	842.21...	271.79...	0.8296004
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	10	846.54...	307.23...	0.87036486
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	11	851.44...	322.61...	0.92756949
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	12	862.41...	315.26...	0.95233405
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	13	855.53...	304.17...	0.91536653
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	14	857.31...	317.18...	0.93100941
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	Upright Row	30	15	864.76...	332.17...	1.00660693
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	1	795.57...	158.55...	0.59901055
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	2	814.75...	182.25...	0.68089705
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	3	816.80...	195.57...	0.72620966
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	4	815.02...	178.00...	0.67057687
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	5	807.47...	177.28...	0.65399513
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	6	813.15...	176.35...	0.65286952
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	7	804.04...	172.89...	0.63321952
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	8	801.70...	159.39...	0.59529737
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	9	799.01...	159.48...	0.59694484
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	10	790.32...	148.65...	0.55992276
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	11	791.69...	153.65...	0.57238741
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	12	786.64...	155.63...	0.57933025
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	13	789.54...	159.52...	0.59314155
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	14	788.40...	157.4715	0.58530518
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - L - DB	25	15	783.09...	154.82...	0.58578899
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	1	797.72...	167.62...	0.61918434
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	2	801.76...	159.99...	0.59215638
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	3	803.11...	165.40...	0.61826236
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	4	795.81...	153.17...	0.56928765
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	5	796.18...	155.70...	0.58490365
MBFW8D4	10/15/2015	7:25 AM	8:00 ...	0:35	14:51	One-Arm-Row - R - DB	25	6	794.69...	154.66...	0.57748979

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I used various names for the same exercises over the years!



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Recoding exercise names in JMP 12

Recode - JMP Pro

Count	Old Values (31/789)	New Values (14/400)
3	BB military press	BB shoulder press
3	BB shoulder press	
65	1 arm DB shoulder press	DB 1 arm shoulder press
62	DB 1 arm shoulder press	
28	1 arm shoulder press	
6	1-arm shoulder press	
5	1 arm DB press	
2	1 arm overhead DB press	
1	1 arm DB overhead press	
1	1 arm overhead press	
8	Alt DB shoulder press	DB alt shoulder press
7	DB alt shoulder press	
5	Alt shoulder press	
2	Alternate DB shoulder press	
2	Corkscrew shoulder press	DB corkscrew shoulder press
9	Seated DB shoulder press	DB seated alt shoulder press
7	Seated alt DB shoulder press	
2	Seated alt DB press	
13	DB seated shoulder press	DB seated shoulder press
3	dumbbell shoulder press	DB shoulder press
1	DB shoulder press and lateral raise	DB shoulder press and lateral raise
1	DB shoulder press and DB overhead ext	DB shoulder press and overhead extension
242	DB shoulder press	DB standing shoulder press
66	Shoulder press	
6	Standing shoulder press	
4	DB Shoulder press	
3	Standing DB shoulder press	
8	Triple shoulder press	DB triple shoulder press

Done

Cancel

Undo Redo

Filter

Show only Grouped

Show only Ungrouped

Group

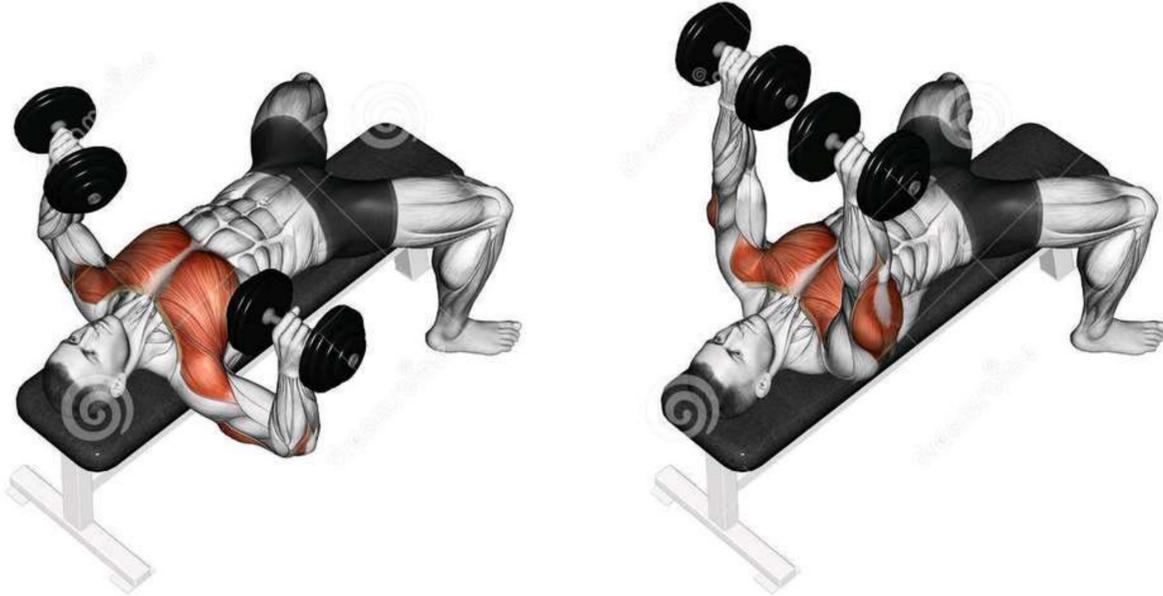
Help

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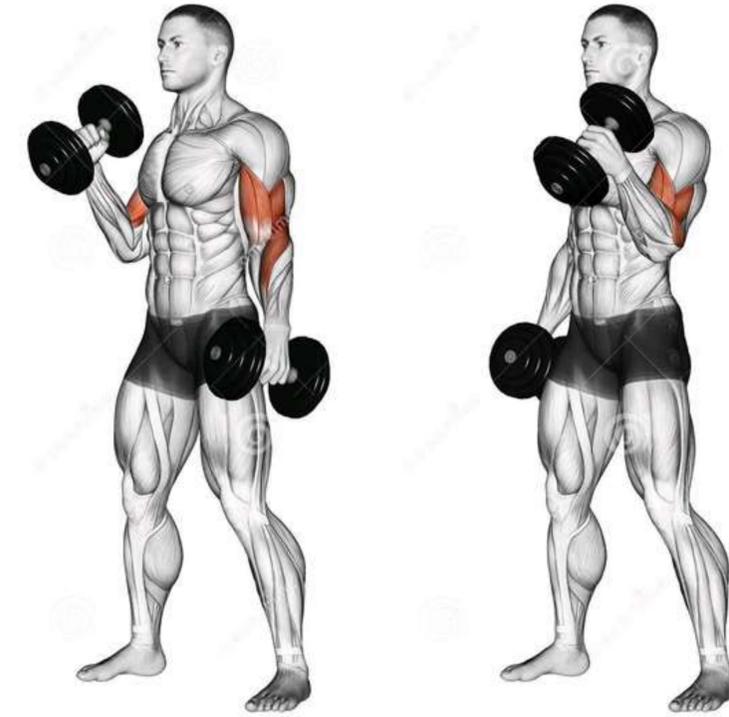
Total Weight Lifted examples

Exercise Name > Primary Body Part > Body Area

Total Weight Lifted = Sum(Weight used) x # of Reps x # of Sets

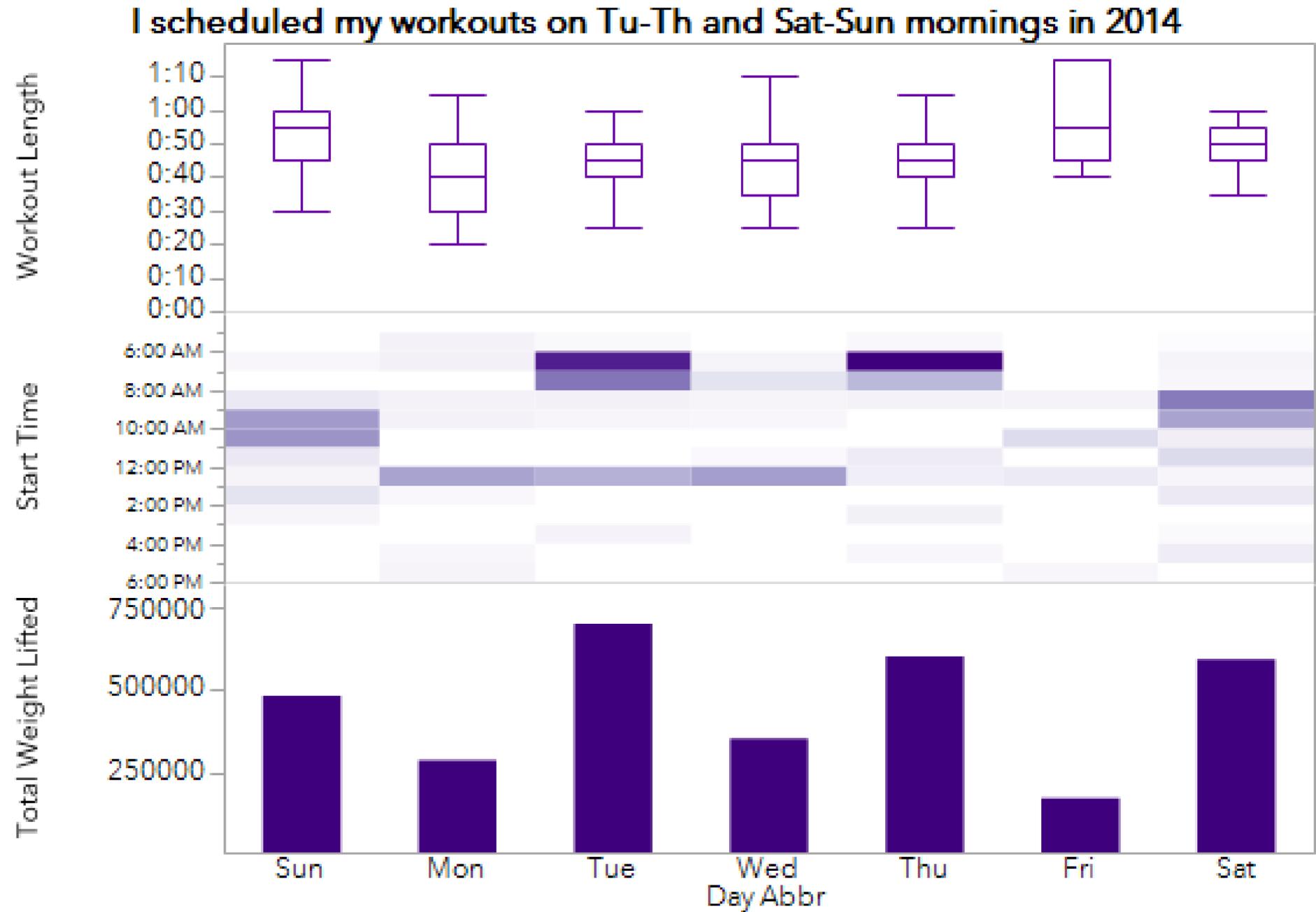


DB Chest Press > Chest > Upper Body
TWL = 60 lb x 12 reps x 4 sets = 2880 lbs



DB Hammer Curl > Biceps > Upper Body
TWL = 30 lb x 12 reps x 4 sets = 1440 lbs

Workout schedule graph

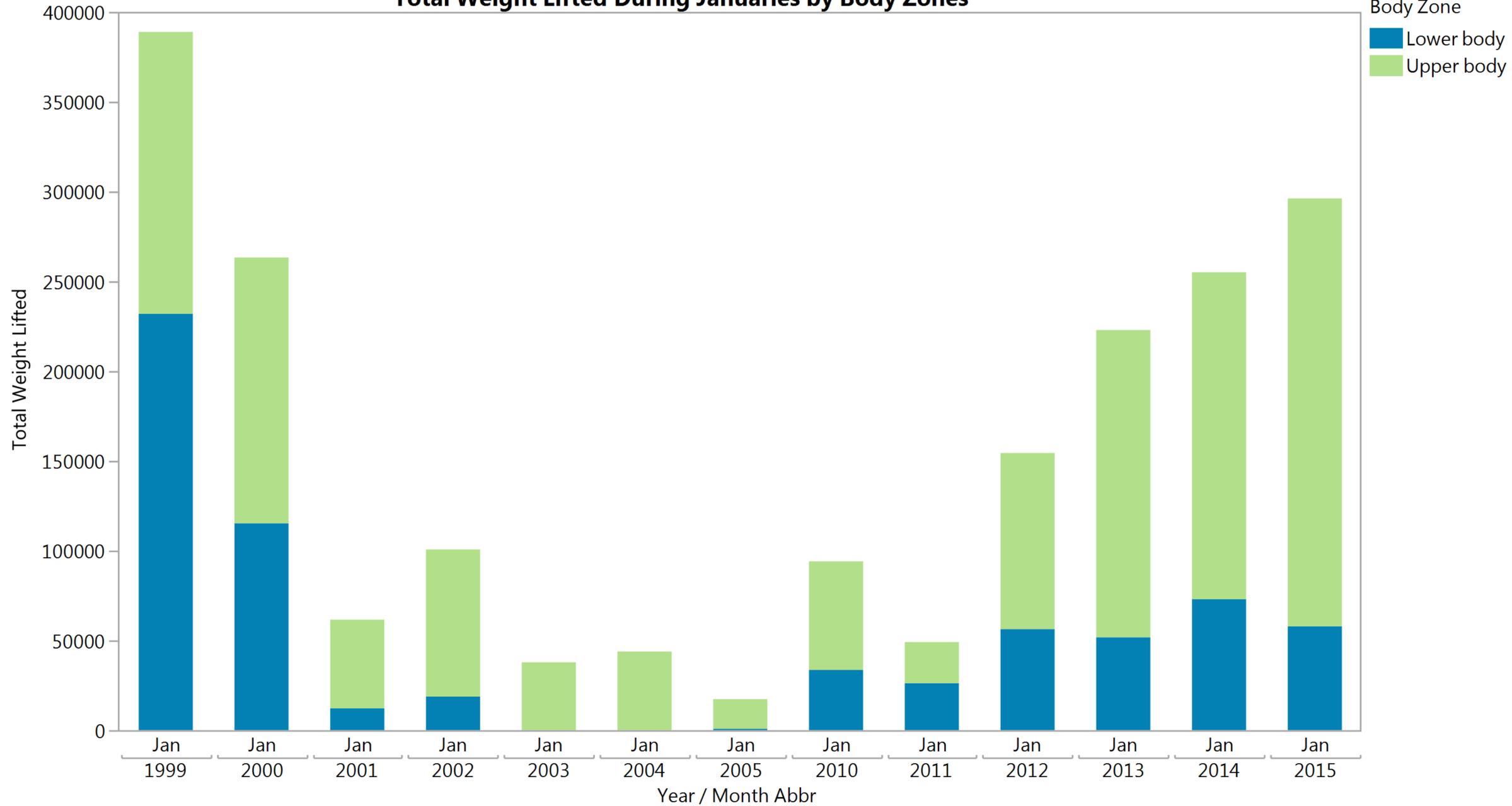


- The top box plot captured duration information.
- The middle heat map tracked the start time of my workouts. My schedule was to work out early Tuesday and Thursday mornings, and slightly later on weekend mornings. The heat map also revealed that I occasionally worked Mon.-Wed. at lunchtime.
- The bottom bar graph shows that the sum of the weight I lifted was greatest on my scheduled days.

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Weight lifted during Januaries

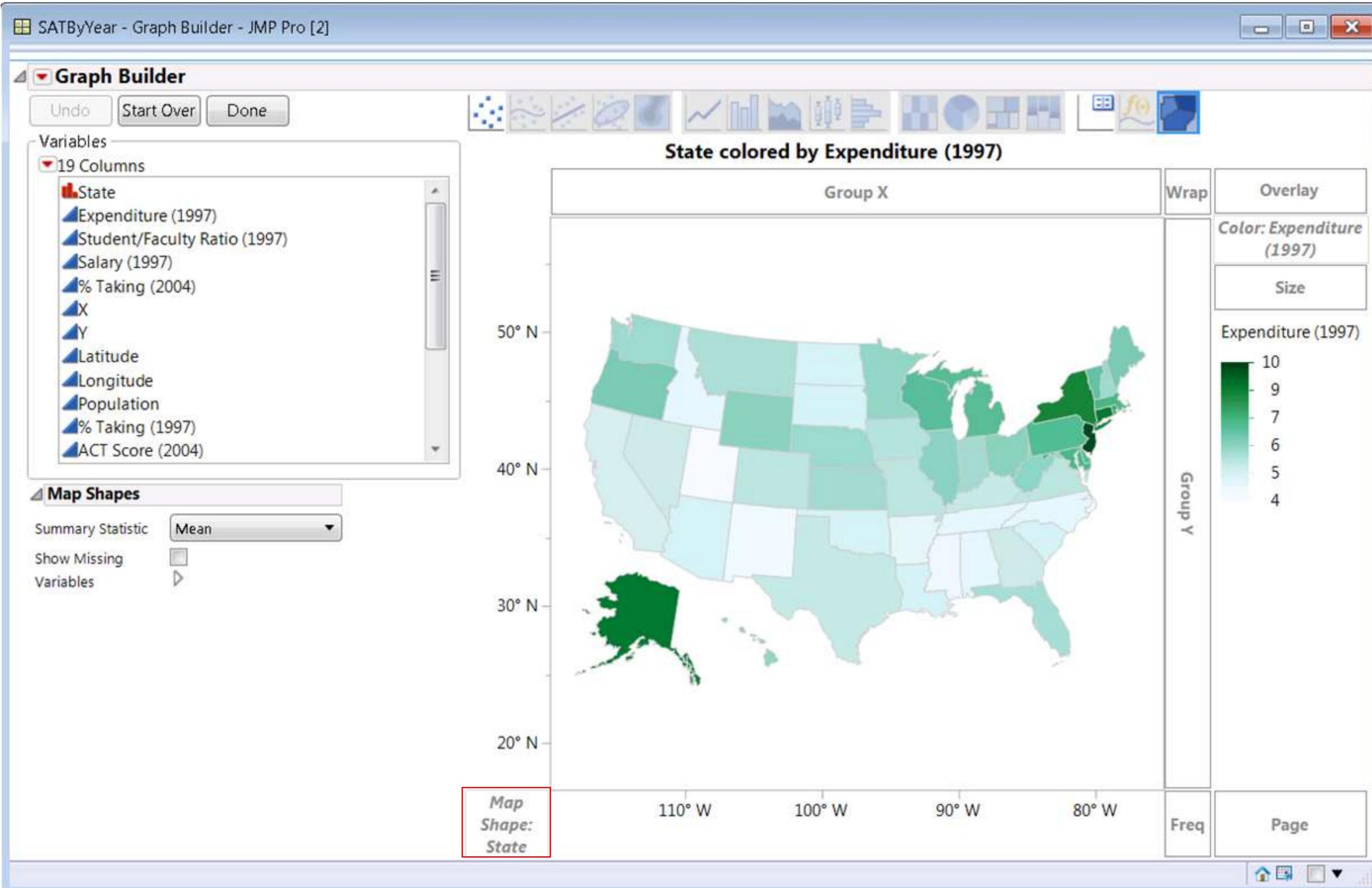
Total Weight Lifted During Januaries by Body Zones



- Month and Year are nested on the X axis
- Total Weight Lifted is the Y variable
- Body Zone is the Overlay variable

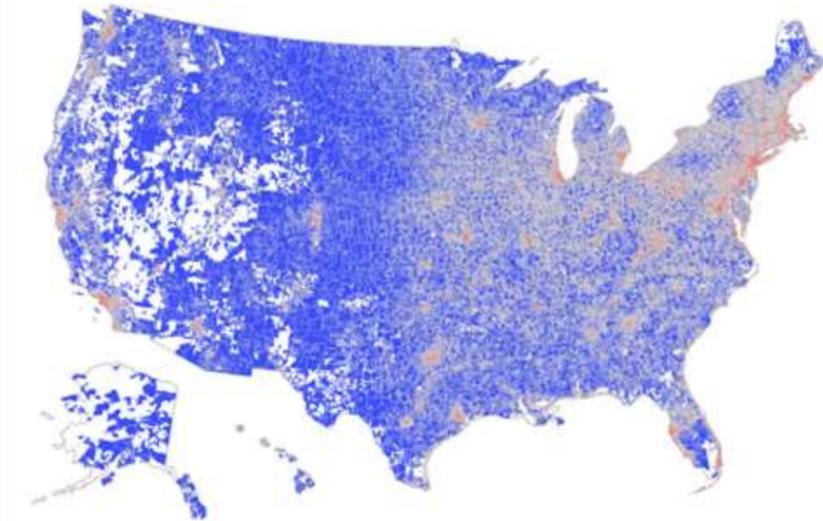
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Map Shape drop zone

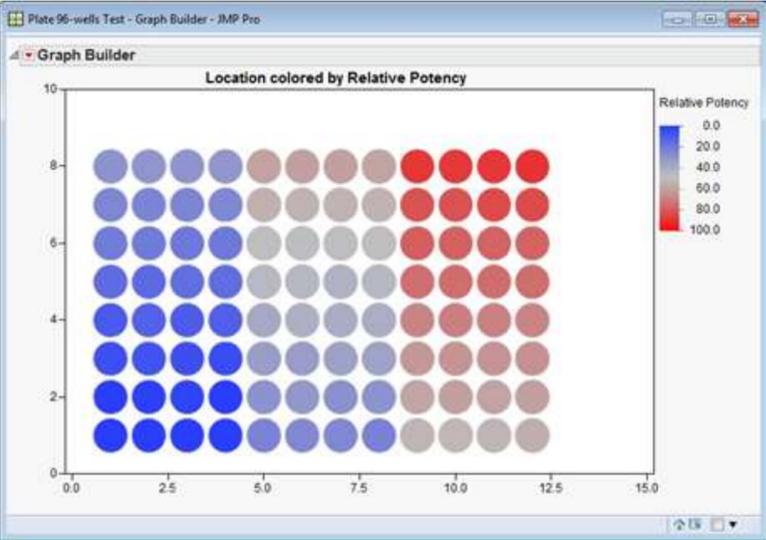


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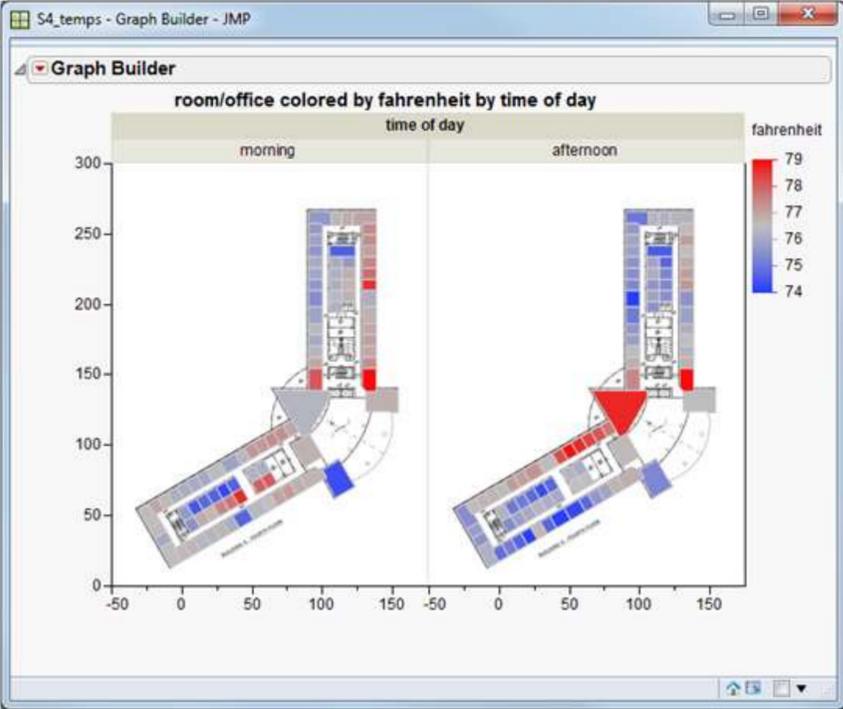
Custom map entries on the JMP blog



Author: Xan Gregg
Zip Code Map



Author: Mark Bailey
Microtiter Plate



Author: Audrey Shull
Building Floor Map

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Creating custom map shapes with the Custom Map Creator Add-In

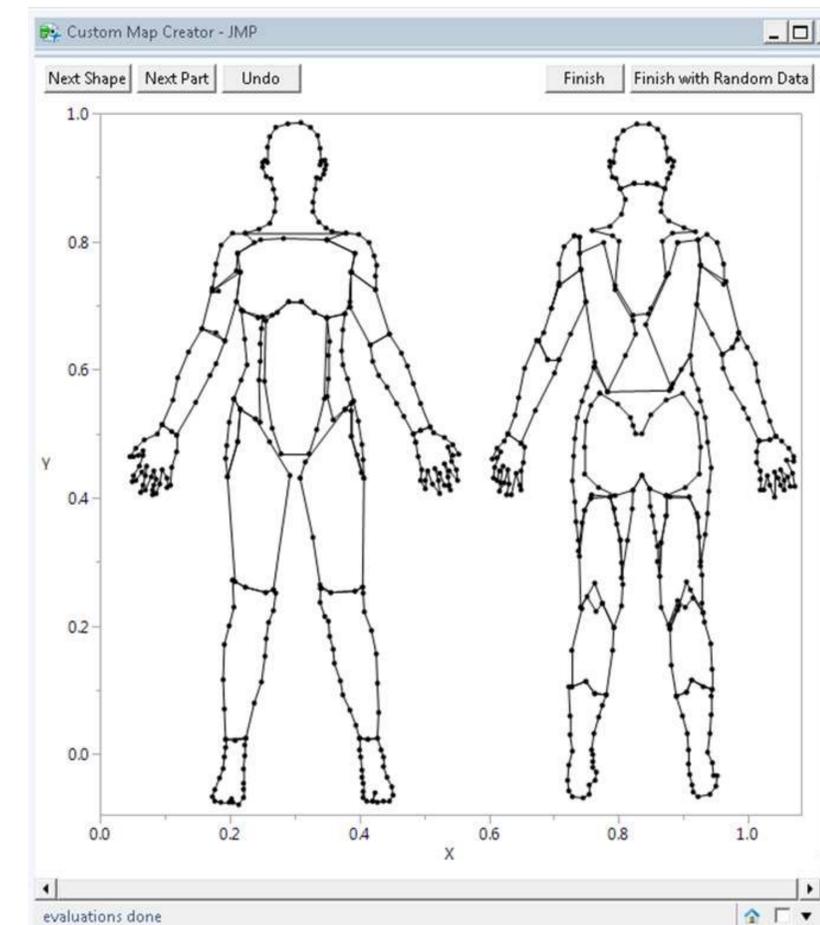
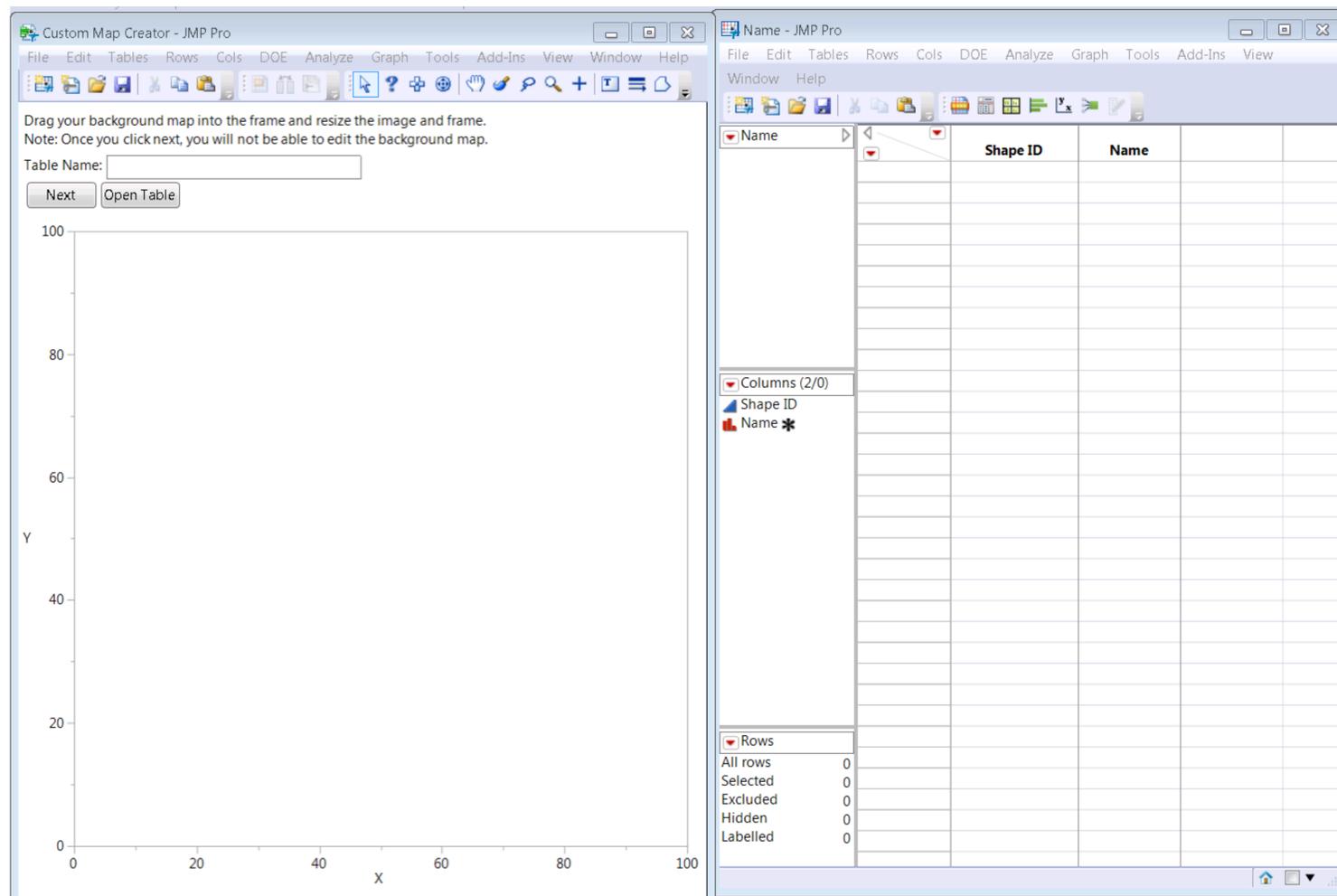
Custom Map Creator Add-In

The Custom Map Creator add-in allows you to easily create custom shapes used by Graph Builder. This add-in creates two tables to define the shapes, an XY table and a Name table. Search for “Create Map Shapes” in the JMP Help for more information on these two tables and how to use them.

To start creating your custom map shapes, launch the add-in through the menu items Add-Ins -> Map Shapes -> Custom Map Creator. Two tables will open in the background followed by the Custom Map Creator GUI.

<https://community.jmp.com/docs/DOC-6218>

Installs into Addins > Map Shapes > Custom Map Creator



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Completed Custom Map Shape Files

Shape ID	Name
1	Chest
2	Shoulders
3	Abs
4	Biceps
5	Quadriceps
6	Back
7	Trapezius
8	Glutes
9	Hamstrings
10	Triceps
11	Calves
12	Forearm
13	Obliques
14	Hip
15	Forearm2
16	Hips
17	Front Calf
18	Lower leg
19	Feet
20	Hands
21	Back of Head

Shape ID	Part ID	X	Y
1	1	0.2123865878	0.7815292517
2	1	0.2477843524	0.8025360544
3	1	0.283182117	0.8046367347
4	1	0.3500445613	0.8025360544
5	1	0.3933084959	0.7815292517
6	1	0.3874088684	0.7521197279
7	1	0.385442326	0.7059047619
8	1	0.377576156	0.6869986395
9	1	0.3500445613	0.6806965986
10	1	0.3303791365	0.6890993197
11	1	0.3107137117	0.7059047619
12	1	0.2910482869	0.7059047619
13	1	0.2654832347	0.6848979592
14	1	0.2438512674	0.6806965986
15	1	0.2202527577	0.6912
16	1	0.2104200453	0.7059047619
17	1	0.2163196727	0.7521197279
18	1	0.2123865878	0.7815292517
19	2	0.1730557382	0.7227102041
20	2	0.2104200453	0.7542204082
21	1	0.2123865878	0.7815292517
22	1	0.23795164	0.7983346939

The Custom Map Creator creates a pair of files as you click to define shapes.

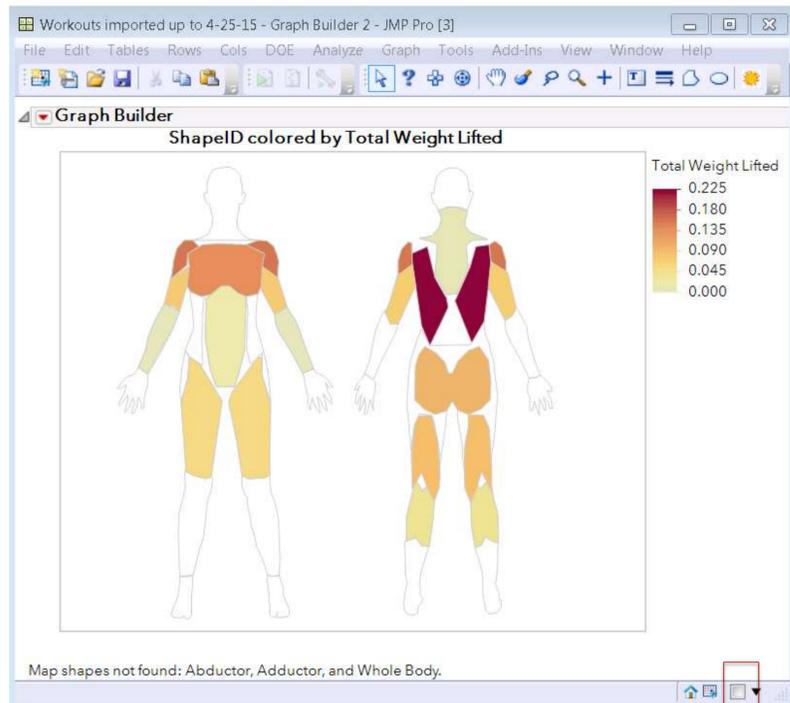
One file defines shape names and the other lists the X-Y coordinates which define shape outlines.

These files must be saved in your user Maps directory.

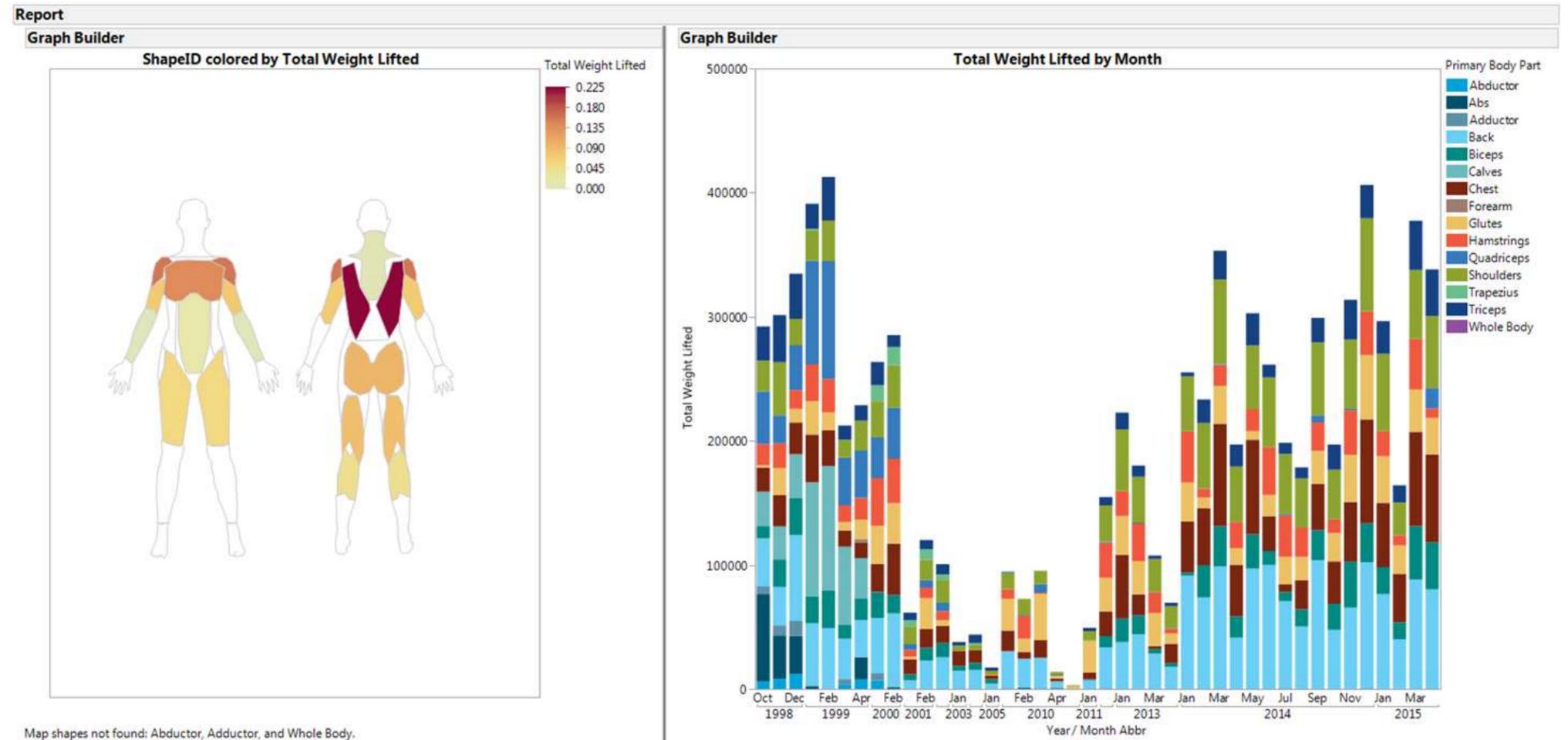
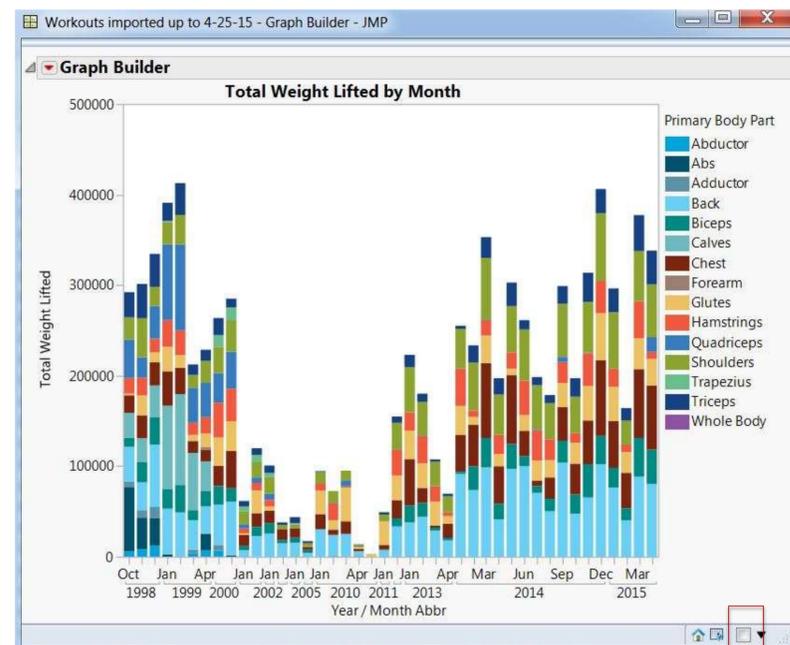
Name	Date modified	Type	Size
Muscle Shapes2-Name.jmp	3/5/2015 10:57 AM	JMP File	2 KB
Muscle Shapes2-XY.jmp	3/5/2015 11:02 AM	JMP File	24 KB

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Combine Windows



Combine
Windows



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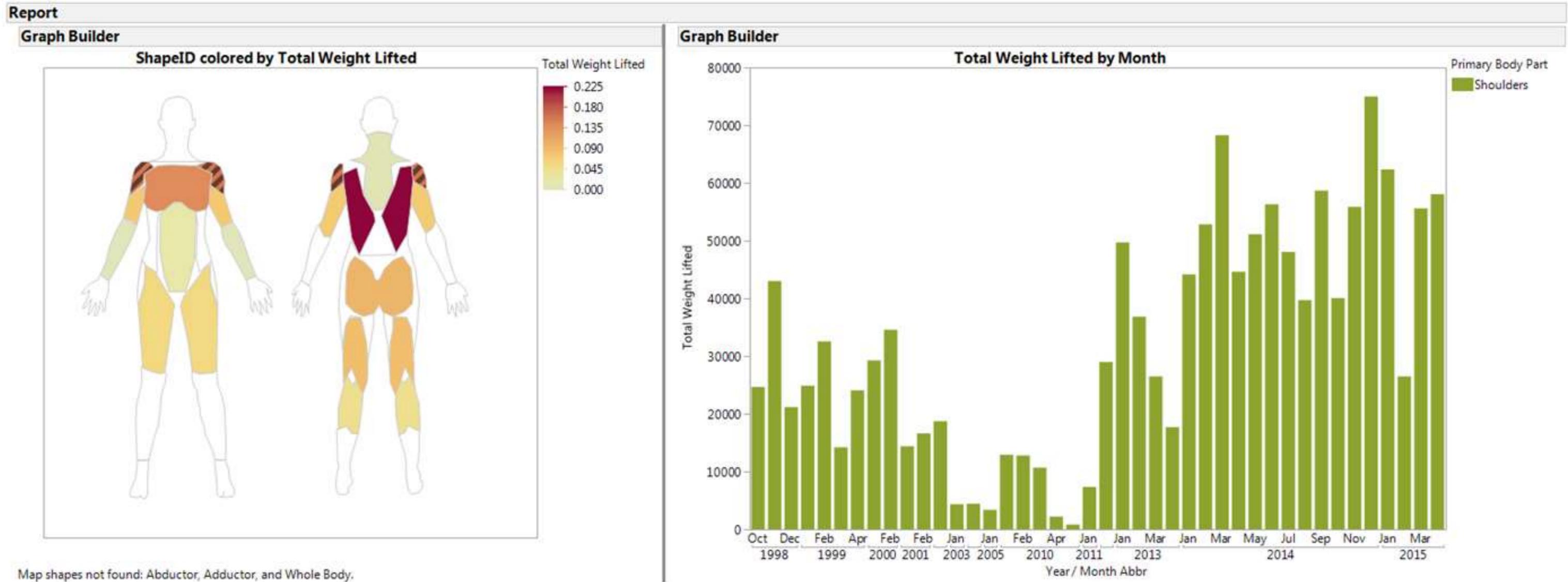
Selection Filter

The screenshot displays the JMP Pro software interface. On the left, a sidebar shows a list of applications and columns. The main workspace is divided into several panels: 'Application Builder' on the left, 'Report' in the center, and 'Objects' and 'Properties' on the right. The 'Report' panel shows a graph titled 'ShapeID colored by Total Weight Lifted' with two human figures. The 'Properties' panel shows settings for 'Report2', including 'Variable Name', 'Position', 'Tables', and 'Roles'. The 'Objects' panel shows a tree view of the application structure. The 'Application Builder' panel shows various components like 'Reports', 'Data Table', and 'Containers'. The status bar at the bottom indicates 'x=80 y=152' and the system clock shows '5:19 AM 9/10/2015'.

Right click on a graph in a JMP application and choose **Use As Selection Filter**.

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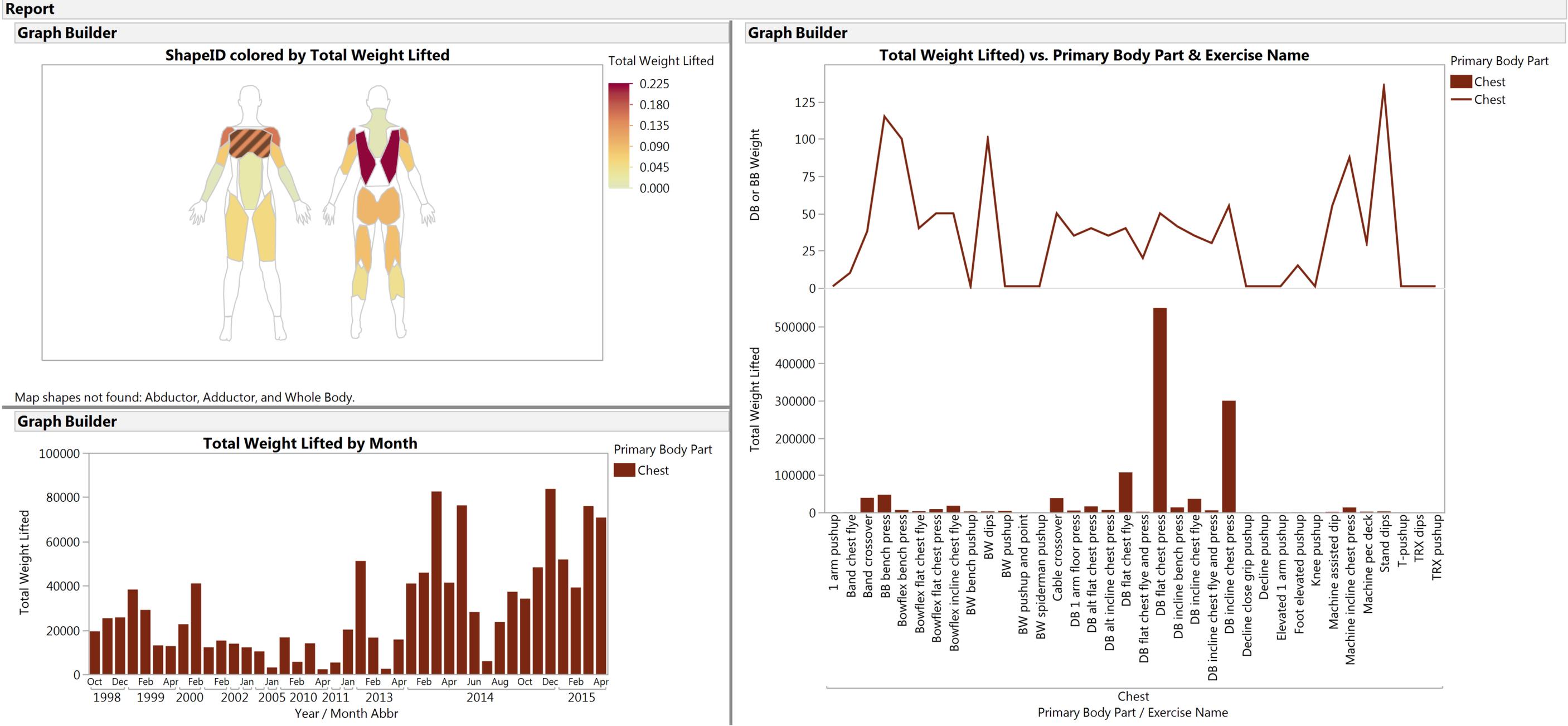
Filtering to view body part patterns



Clicking on my body part graph shows monthly total weight lifted numbers for specific body parts.

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Another dashboard view



This more complex dashboard adds information about specific exercises.

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