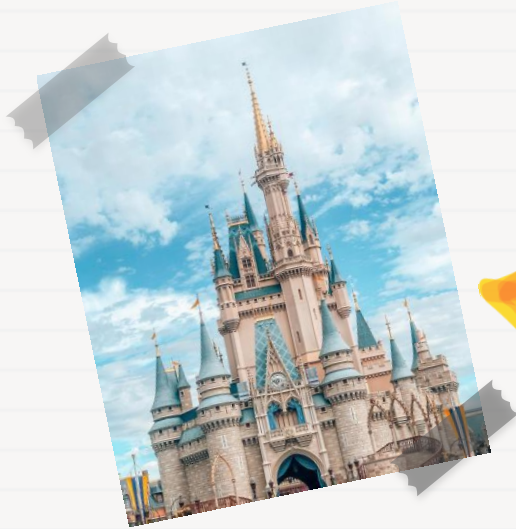




Ride Optimization Walt Disney World

Best day
ever!

How Do I Decide?



There's too much to do here!

- It's impossible to ride every ride at Walt Disney World's Magic Kingdom in one day
- There is all kinds of advice out there
- None of it is customized to the user's desires
- Optimization can figure out a way to design the best list of rides based on the user's choices

What to Think About for Planning

Park Hours

How long is the park
open today?



Eating

We have to make sure
there's time for food




Shopping

Can't go home without
souvenirs!



Restrooms

Last but not least,
can't be forgotten



Everyone
is
different!



Problem

How do we figure out
what the “best” day
of rides really
means?



Did You Know?

The rides used to be ranked
A-E (lowest to highest).

Maybe we can do that again,
only make it personal.



Rating

So I can rate the rides 1-5...



Maximum

I don't want to ride *It's a Small World* 5 times...



Minimum

But if Johnny doesn't ride Dumbo, look out!

Best Ride Day (again)

That
doesn't
answer the
question...

Process

Time available =
park hours -
necessary stuff

Don't forget
time to get to
the next ride

Step 1

Step 2

Step 3

Step 4

Best ride day =
Most time on
the my best rides

Time riding =
(wait time + ride time)
* number times riding

Testing

To test the theory, we need to set some defaults.

- We can get the ride ratings from online
- The park is usually open at least 9am to 9pm
- 1.5 hours for food (1 hour for a meal, plus snack time)
- 0.5 hours for breaks
- 0.5 hours for shopping
- 15 minutes between rides is a good average

Ride List

Ride Name	# Times
Big Thunder Mountain Railroad	2
Haunted Mansion	2
Jungle Cruise	2
Pirates of the Caribbean	2
Splash Mountain	2

Not bad. Double rides on all of the best rides without super long waits.

But let's get some personal points of view and see what else the optimization can handle...

User Choices

PERSONAL	Rating	Max	Min
Astro Orbiter	1	0	
Barnstormer	3	2	0
Big Thunder Mountain Railroad	5	3	1
Buzz Lightyear's Space Ranger Spin	5	4	0
Dumbo: the Flying Elephant	2	1	0
Haunted Mansion	5	2	1
It's a Small World	2	1	1
Jungle Cruise	4	1	1
Mad Tea Party	1	0	
Magic Carpet of Aladdin	1	0	
Peter Pan's Flight	5	2	1
Pirates of the Caribbean	5	2	1
Prince Charming Regal Carousel	1	0	
Seven Dwarf's Mine Train	3	1	0
Space Mountain	4	1	1
Splash Mountain	5	2	1
The Many Adventures of Winnie the Pooh	1	0	
Tomorrowland Speedway	3	1	1
Tomorrowland Transit Authority People Mover	4	2	1
Under the Sea: Journey of the Little Mermaid	3	1	0

Ride List

Ride Name	# Times
Big Thunder Mountain Railroad	1
Buzz Lightyear's Space Ranger Spin	1
Haunted Mansion	1
It's a Small World	1
Jungle Cruise	1
Peter Pan's Flight	1
Pirates of the Caribbean	1
Space Mountain	1
Splash Mountain	1
Tomorrowland Speedway	1
Tomorrowland Transit Authority People Mover	1

Fit in all of the required rides, plus one extra. But the choices didn't leave a lot of leeway for optimization.

User Choices

PERSONAL	Rating	Max	Min
Astro Orbiter	1	0	
Barnstormer	3	2	0
Big Thunder Mountain Railroad	5	3	1
Buzz Lightyear's Space Ranger Spin	2	1	0
Dumbo: the Flying Elephant	1	1	0
Haunted Mansion	5	3	1
It's a Small World	4	2	0
Jungle Cruise	3	2	0
Mad Tea Party	1	0	
Magic Carpet of Aladdin	3	1	0
Peter Pan's Flight	4	2	1
Pirates of the Caribbean	5	3	1
Prince Charming Regal Carousel	3	2	0
Seven Dwarf's Mine Train	5	2	0
Space Mountain	2	1	0
Splash Mountain	4	2	0
The Many Adventures of Winnie the Pooh	3	1	0
Tomorrowland Speedway	1	0	
Tomorrowland Transit Authority People Mover	4	2	1
Under the Sea: Journey of the Little Mermaid	3	1	0



Ride List

Ride Name	# Times
Barnstormer	1
Big Thunder Mountain Railroad	1
Dumbo: the Flying Elephant	1
Haunted Mansion	2
Jungle Cruise	1
Peter Pan's Flight	1
Pirates of the Caribbean	2
Splash Mountain	1
The Many Adventures of Winnie the Pooh	1

Ah now there we have some optimization going on! Only 5 required, but 10 rides recommended.

Thanks!

Debbie Hunton
dhunton@my365.bellevue.edu
<https://dhunton6.wixsite.com/dhunton>



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