Fishing for Answers:

Estimating Fish Probabilities and Bell Returns in Animal Crossing

A data analytics capstone project in Google Sheets

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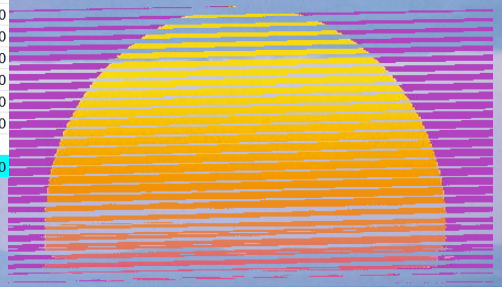
What's the best way to fish?

I set out to answer:

- What are the odds of catching different shadow sizes and fish?

- Does time of day or water type affect Bells earned per cast?

Ocean Fish	O Size	Quantity	Price	OTot. Bells
Ribbon Eel	Thin	12	600	7200
Clown Fish	1	39	650	25350
Sea Horse	1	40	1100	44000
Horse Mackerel	2	122	150	18300
Anchovy	2	27	200	5400
Butterfly Fish	2	37	1000	37000
Surgeonfish	2	14	1000	14000
Puffer FIsh	3	51	250	12750
Squid	3	55	500	27500
Zebra Turkeyfish	3	55	500	27500
Barred Knifejaw	3	14	5000	70000
Red Snapper	4	35	3000	105000
Sea Bass	5	111	400	44400
Olive Flounder	5	30	800	24000
Giant Trevally	5	1	4500	4500
Blue Marlin	6	3	10000	30000
Napolean Fish	6	4	10000	40000
Suckerfish	Fin	12	1500	18000
Ocean Sunfish	Fin	12	4000	48000
Whale Shark	Fin	11	13000	143000
	Total	685	Total Ocean Bells	745900



Data Collection:

- Manually tracked 3,000+ fish in July
- Logged time of day, shadow size, species, and water type

Processing in Google Sheets:

- Cleaned and separated day/night tabs
- Created summary tables for shadow frequency and Bells earned

Calculated:

- Shadow size probabilities
- Species frequency by shadow
- Bells per cast by time, size, and water type

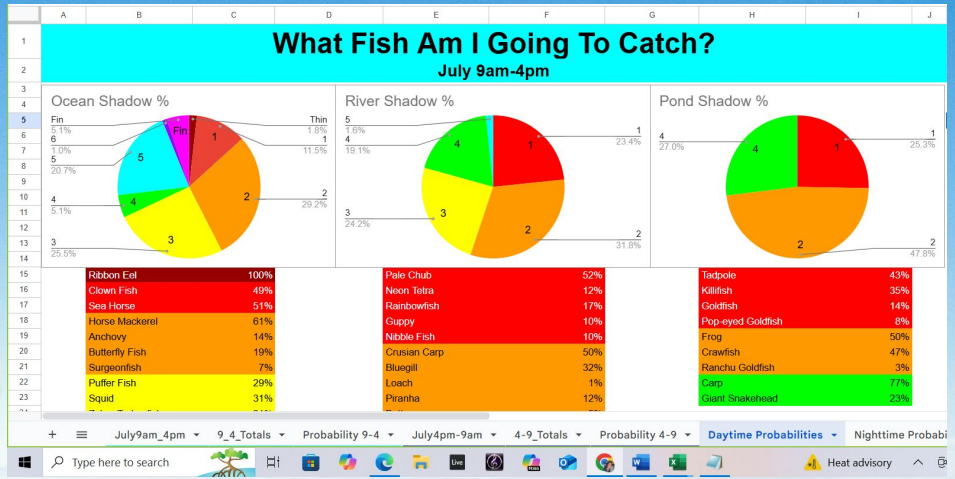
Used

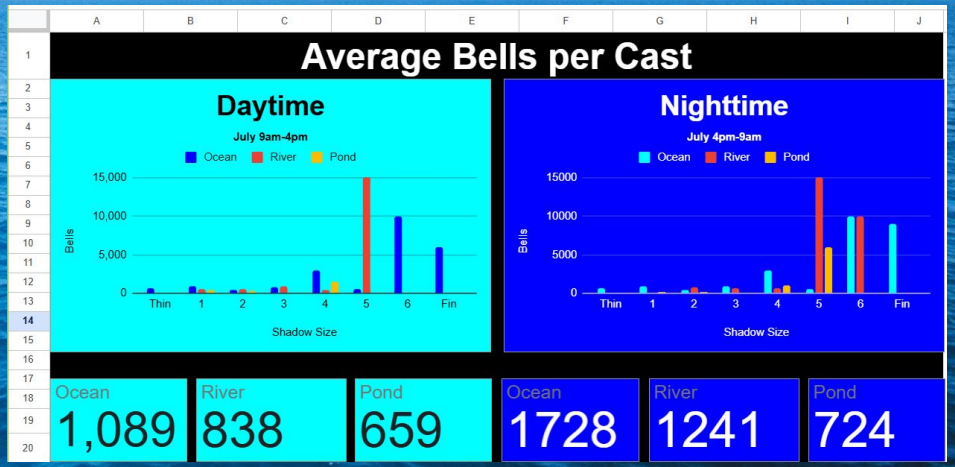
- Pivot tables
- Summary sheets
- Basic statistics

Dashboards

1 and 2. Shadow Size Probabilities And Species Frequency by Shadow, Daytime and Nighttime

3. Bells per Cast by Shadow Size, Time of Day and Location



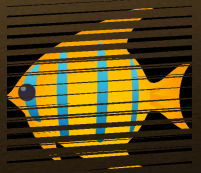


Key Findings

- Ocean (Night): Highest Bells per cast
- Rivers: Size 5 and 6 outperform size 4
- Ponds: Lowest average returns
- Larger shadows are rarer but yield higher-value fish

Limitations

- Rare fish like Mahi-Mahi not caught
- Pier fish grouped with ocean fish
- Rain not tracked
- Fish were caught as they were encountered (not a random sample)



What I Learned:

- Real-world data collection and analysis

- Building interactive dashboards

- Turning gameplay into strategic insight

- Analytics helped me stay engaged through a tough time

— and have fun!