



# Pascal the Penguin's P-Value Pursuit

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\*All images generated using Canva (hence Pascal's Rapid appearance changes)



In the icy land of Data-berg, there lived a curious penguin named Pascal. Pascal loved numbers, graphs, and experiments, but most of all, he loved... p-values!



Pascal loooooooved ice cream. He went to his favorite store and noticed a new flavor. “Is this new fish-flavored ice cream the tastiest, or is it just in my head?” he thought mid-lick. He wrote down his null hypothesis: “The ice cream has no special taste.”





Pascal knew he had to find the  $p$ -value to test his hypothesis. "If my  $p$ -value is small enough," Pascal said, "I can reject the null hypothesis!" And off he waddled on his quest.



Pascal soon met Ollie the Owl, perched on an icy branch.

“Where are you off to, Pascal?” Ollie asked.

“I’m looking for the perfect p-value!”

“Remember, p-values are just one part of the story,” Ollie hooted wisely.

But Pascal continued on, ignoring Ollie’s advice.



Next, Pascal arrived at the Data-Berg. He started climbing, gathering minimal ice cream data as he waddled up. "Gosh, I just needed to get to the p-value!"





Ollie's quote rang in Pascal's head: "You'll need to think about sample size too, Pascal. It's not just about the p-value."

Pascal waddled on, ignoring the Owl's warning. "P-value, p-value, p-value," he sang.



Along the way, Pascal stumbled on a group of penguin scientists.

“Join us, Pascal! We’re discussing effect sizes and confidence intervals,”

“No time for that! I’m chasing the p-value!” Pascal yelled as he waddled away.





Finally, Pascal reached the Great P-Value ice hole. He tossed in his data, whispered his null hypothesis, and waited. The hole began to shake.....and out popped... a p-value of 0.04!



“Eureka! It’s below 0.05! I can reject the null hypothesis! The fish ice cream is AMAZING!”  
Pascal confidently proclaimed.



On his way back home, he encountered Ollie. Eager to tell him the news, Pascal shouted “The ice cream is Amazing my friend!” But something was wrong. Ollie did not seem impressed.

“Wait, Pascal. Did you check the assumptions of your test?”

“What assumptions?” Pascal asked.

“Well, things like sample size! Your p-value might not be as magical as you think!”





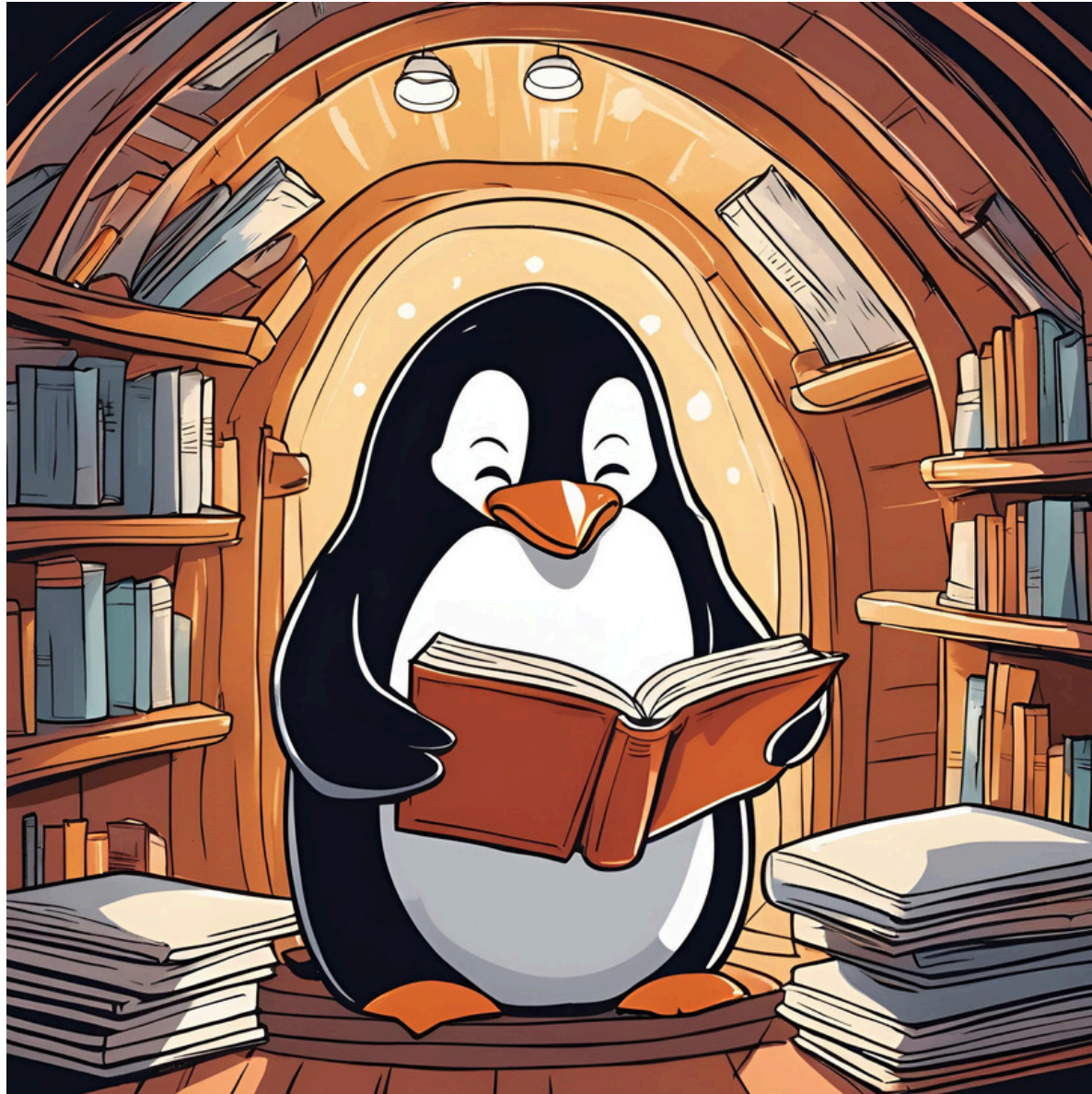
Pascal frowned. "Oh no... I was only focused on the p-value! What if I missed something important?"

Ollie nodded. "Remember, Pascal, the p-value is just one part of the whole story. There's more to statistical analysis!"



Pascal sat down, rechecked his data, and reviewed his assumptions. He realized he had far too little data to make a conclusion "This whole journey and I thought the p-value would be my answer" he sighed. "But I learned more about analysis !"





And so.....A new penguin  
data scientist was  
born...The End.