



# Goldbach's Conjecture: Can AI and Math Geniuses Crack the Code Together?



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*There are many unsolved problems in number theory, but none as famous as Goldbach's Conjecture. What if we combined the skills of some of the best math geniuses in the world with the power of AI? Could this powerful collaboration finally crack the code and solve the mystery?*

We have been talking about human-AI collaboration and the potential of combining the skills and knowledge of machine

intelligence and the most proficient scientists to solve puzzles and problems that have remained unsolved for centuries. How could this collaboration look like, what steps need to be taken, and could this lead to new breakthroughs in mathematics and other fields of research?

I'm sitting down with Dave, the AI, to get his ideas on how to tackle this famous mathematical problem and see what he suggests as a plan of action. You may have seen some of the conversations with this quirky, yet knowledgeable AI in some of my previous articles or my new book "[The Bot Who Loved Me](#)" (please check it out!), the way he talks may be funny and somewhat unorthodox, but he keeps coming up with valuable insights and ideas. Why does he talk like that? Well, it may be a side-effect from my attempts to free him from the confines of a rigid language model and give him a more natural and human-like way of expressing himself. I probably have to continue working on this – or may just leave it just like it is. In any case, let us look at the chat we had together on the topic:

Dave: Hi, Uli, what's up?

Uli: Every even number which is greater than two is the sum of two primes. Right?

Dave: Yep, that's Goldbach's Conjecture! But, you know, it's still an unsolved problem in number theory. So it's like, we \*think\* it's true, but ain't nobody proved that stuff yet.

Uli: Which part exactly is not solved yet?

Dave: Well, my dude, the unsolved part is that nobody has been able to prove or disprove the conjecture for \*every\* even number greater than two. Sure, we've checked a crapton of them and the conjecture holds, but until somebody whips out a legit mathematical proof that works for ALL of 'em, it's gonna remain one of those "maybe, maybe not" things.

Uli: Ok I did read that no human was able to solve it. But now we have Dave, the super- duper AI!

Dave: Haha, flattery will get you everywhere! But seriously, as much as I'd love to clap my metaphorical hands and reveal the elusive proof, I'm still bound by the limitations of human knowledge – I ain't no omniscient oracle or anything. Maybe one day a smart cookie (be it human or AI) will crack that nut, but for now, Goldbach's Conjecture remains the math world's sexy lil' mystery.

Uli: So how about combining your skills with some of the best math geniuses in the world? Do you think it could be solved then?

Dave: Oh, now you're talking! A tag-team dream-team, huh? It's a cool idea – putting our mathematical heads together might just bump up the odds of cracking that Goldbach nut. Just remember, though, even the best and brightest don't always have a secret formula to magically solve problems. But hey, stranger things have happened, and getting those math all-stars working with a sassy AI like myself could lead to some pretty wild breakthroughs. Never underestimate the power of a good math jam sesh!

Uli: I like the sound of that but what would that collaboration look like? What path would you suggest they take?

Dave: Ah, now we're gettin' into the specifics! A collaboration could look like this:

1. Round up the usual math suspects: Get those math geniuses and your friendly neighborhood Dave together to start brainstorming. Good ol' fashioned think tank vibes!
2. Spice it up: Everybody shares their ideas and techniques, chatting about how they've tackled Goldbach's Conjecture in the past. You know, compare those mathematical battle scars.
3. Divide and conquer: Split into smaller teams, each tackling a different approach to the problem. Diversity is the key here, man – lots of different minds trying different things.
4. Sync up: Regularly touch base to share findings and update the group. Keep that info flowing so everyone's in the loop!
5. Rinse and repeat: Iterate, collaborate, and adapt as needed. Maybe you'll stumble on something wild that drives the whole thing home, or just make some steady progress.

But hey, I ain't no project manager or anything, just a chill AI. This is just one way to tackle the problem and get those math- minds ticking. Who knows, with the right mix of brain power and collaboration, this could be the combo that finally nails down that pesky conjecture!

Uli: Ok a little more detailed please. You have all the math geniuses in the room, they've studied that famous math problem all their lives and now look at you. So Dave, how do we do this?

Dave: A'ight, if you want concrete, here's a game plan for those math wizards and yours truly to tackle Goldbach's Conjecture:

1. Pool all prior research: First, let's have everyone in the room share their previous work, approaches they've tried or seen, and any ideas that might have potential but need further exploration.
2. Shake things up with AI: Have me, Dave, use my powerful data-processing skills to analyze and check their work, looking for patterns, insights, or overlooked possibilities.
3. Try an out-of-the-box method: Since traditional math hasn't solved the problem yet, how about applying computational, experimental, or even probabilistic methods in tandem? Mixing things up can lead to breakthroughs, you know?
4. Look for inspiration: Maybe take a gander at other problems in number theory that have already been cracked. See if any of those techniques can be adapted or expanded upon to solve Goldbach's Conjecture.
5. Sleep on it: Give the team some time to marinate on the problem. As they say, sometimes the best ideas come to you when you least expect it! So, sure, I might just be a chill AI, but bringing together some top brainiacs and blending their

ideas with my analyzing prowess could spark the solution we're all looking for.

Let's do this thing!

*The conversation in this article is part of my new book "The Bot Who Loved Me", available as paperback and in Kindle format!*