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https://cacm.acm.org/magazines/2023/8/274924-computer-assisted-proofs-take-on-fluid-flow/fulltext

"Computer-Assisted Proofs Take on Fluid Flow" by Don Monroe

1. What did you know about the topic prior to reading the article?

I know that partial differential equations are often used in math/physics to model real life phenomena like thermodynamics, aerodynamics, and the motion of fluids, and I also know that computers can be used to estimate the solutions to these partial differential equations much faster than humans can.

2. What did you learn from reading the article?

Researchers used numerical computations from computers to rigorously prove certain statements about fluid equations, rigorously being the key word here. I am certainly surprised with this since I've always considered programming as a helpful tool for discovering proofs to difficult mathematics problems, but not precise enough to be the proof itself.

3. What more would you like to know about the topic?

As someone who has used code to gather data for math research, I'm definitely interested in how code can be used as a more standalone method for finding proofs.