

ELEVATOR PITCH

“CADlingo” – From language to CAD

1. The Problem

In my career as an architect, I spent countless hours dealing with technical drawings. The biggest frustration was how even a small design change, like adding a window or shifting a furniture, meant I had to go back into AutoCAD, redraw, rearrange everything, and sometimes even print multiple versions just to catch mistakes. Before AutoCAD, when I did manual drafting, it was even worse. Both in my Architecture school and later in my career, I found myself rushing through the design thinking just to make sure I had enough time for all the production work. The software, meant to be a tool for creation, was instead dictating my workflow and forcing me to prioritize technical edits over design.

2. The Solution

This experience led me to a simple question: What if we could modify our drawings just by describing the changes we want? My project is a tool that does exactly that. It integrates a natural language interface into CAD software, allowing architects to make edits with simple voice or text commands. Instead of clicking and dragging, you can simply say, ‘Make this room two feet wider’ or ‘center the sofa on this wall’ and the drawing updates automatically.

3. The Technology

Now, when I was thinking about how to build this, I knew the system had to be fast and precise. That's why I realized a massive, general-purpose AI would be overkill. So, my approach is to fine-tune a small language model, training it to become an expert only in architectural language. This specialized model then translates requests into clean commands that the CAD software's API can execute. This way, the system stays lean, fast and highly accurate for the specific job.

4. The Impact & Closing

"The impact is a smarter, faster workflow that frees architects from repetitive tasks and gives them time for Design thinking process. Revisions that used to take hours can be done in seconds, accelerating project timelines and improving collaboration. Having lived this problem myself, I know how transformative this tool could be for the Architecture industry. I'm really excited about where this project can go and any support from you all would be amazing as I move forward.