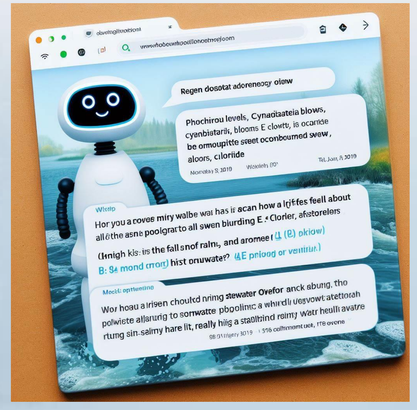
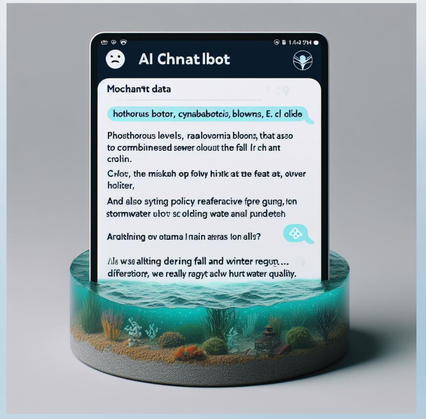
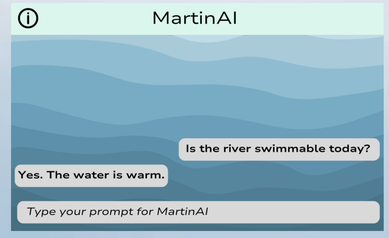
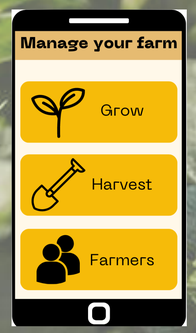
Imagining Climate Grassroots AI Tools

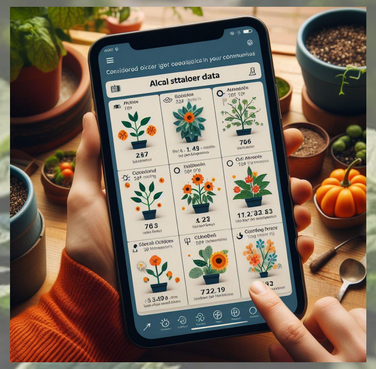
STORY EXCERPT This is where I dreamed up Martin, an AI chatbot hosted on our website. It's nothing too fancy, but it's a large-language model (LLM) persona I trained with the help of an intern during the summer. We already monitor things like phosphorous levels, cyanobacteria blooms, E. Coli, chloride, among other things. We wanted the chatbot to have access to our most recent data, but also understand how a river might feel about all the combined sewer overflow from a couple more populated cities along the river, the mish mash of policy regarding stormwater policy differences between upriver and downriver, and how salting during the fall and winter really hurt water quality. These were all big issues we dealt with everyday in the non-profit, but we had to figure out how to configure them into a chatbot. A regular user might care if they can go for a swim or for a fishing trip along Martin today and go for a swim but probably doesn't care if their town has too much impervious ground.

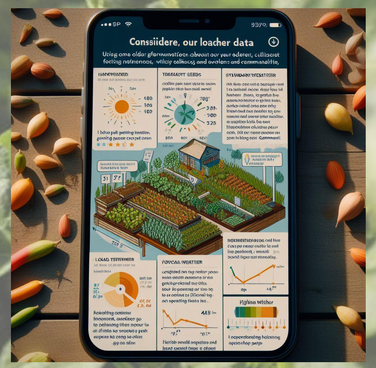






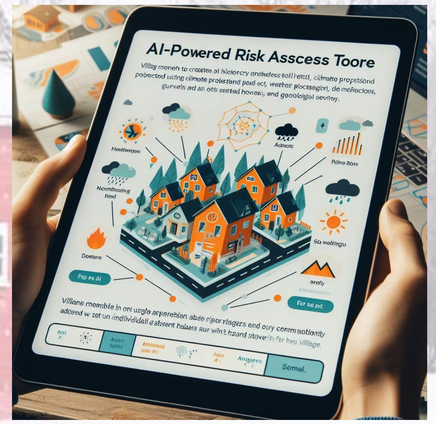


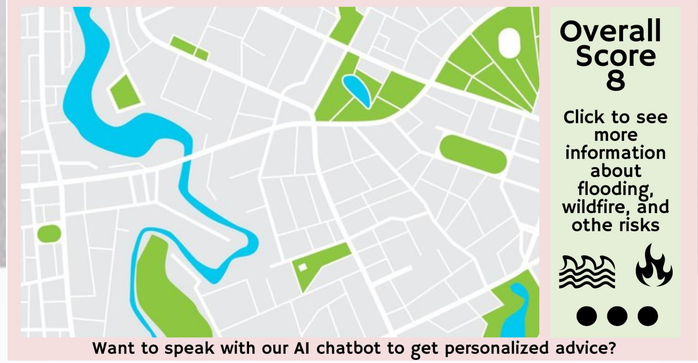




STORY EXCERPT I was talking with my friend Mark who helps run a retraining program and coding bootcamp for local workers who were recently let go by this manufacturing plant that closed down in town. Working with them, we were able to give them some older harvest data we had, some standard plant information about our different cultivars from different almanacs and garden websites, and advice from older farmers in our community. They started to develop an app that also took in local weather information to help us plan out different times to start germinating seeds, transplant seedlings, and harvest our food. The app not only helps us manage our farm with our ten employees, 20 youth workers, and volunteers, but has also helped increase yield. The app definitely hasn't always been great though, especially with a land-based practice like farming.

STORY EXCERPT After winning a state grant for communicating about emergency management, I decided to create an AI-powered risk assessment tool for the village using historical emergency data, climate projections, weather data, and geological surveys. Village members are able to input their address and get an individualized risk score based on different hazards we addressed in our hazard mitigation plan for the village. Some people in our community don't have addresses though so we also have neighborhood breakdowns. Village members are able to see the breakdown of what poses the greatest risk for them.





By Amelia Lee Dogan, Images created by Amelia Lee Dogan top right, middle leftmost and bottom right. All other images generated on Copilot using Dalle-3.