Revolutionizing Agriculture Through Artificial Intelligence

Climate change is destabilizing agriculture worldwide, leaving farmers vulnerable to unpredictable rainfall, droughts, floods, and pests. While **NASA** satellites already generate critical datasets on soil moisture, precipitation, and crop health, this information is often locked in complex scientific formats, inaccessible to the very people who need it most. The result: billions in crop losses, rising food insecurity, and preventable human tragedies.

RootSource addresses this gap by transforming NASA's Earth observation data into localized, actionable, and farmer-friendly insights. Built as the world's first NASA-powered **AI** agricultural exploration game and decision-support system, RootSource combines real-time datasets from **SMAP**, **GPM**, **MODIS**, **GLDAS**, **LANDSAT**, **GRACE**, and **POWER** with a gamified learning experience and multilingual AI advisor.

📌 Project Resources

RootSource AI - Source Code & Documentation: https://github.com/Rafi-uzzaman/RootSource
RootSource AI (Live Application): https://rootsource.up.railway.app/

RootSource Application Preview [RootSource AI also included in application]: https://www.figma.com/proto/UFxkbSyTjdqsrhprPTPLa6?node-id=0-1&t=lTIFhfpSO9kMOfJp-6

RootSource Project Source link:
https://www.figma.com/design/UFxkbSyTjdqsrhprPTPLa6/RootSource?m=auto&t=lTIFhfpSO9kMOfJp-1
RootSource Documentation: https://github.com/Rafi-uzzaman/RootSourceFigma