Cairo University

SolarEase

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VISION / OBJECTIVES

- Mitigate climate change by automating the reduction of carbon emissions.
- Help users assess suitability of solar energy and provide customized solar system sizes based on electricity consumption and financial benefits.
- Offer guidance via an assistant chatbot.
- Provide certified solar installers sorted by nearest to facilitate solar adoption.
- Keep users updated on the solar market via an online marketplace and facilitate buying and selling.
- Enable users to track the productivity of their solar systems daily and hourly.

METHODOLOGY

We used the Waterfall methodology to develop a comprehensive solution that considers all scenarios of solar installation for accurate results, including a robust calculator for customized recommendation, an assistant chatbot for user guidance, a directory of certified installers, and an online marketplace for seamless buying and selling of solar products. Additionally, users who already have solar systems can track their solar system's productivity.

BENEFICIARIES

- Citizen: Benefit from easy installation and long-term financial benefits.
- Environment: Benefit from reducing carbon emissions.
- Government: Benefit from decrease electricity consumption.
- Trusted Solar Installers: Benefit from increased demand.

USED TECHNOLOGIES

- Flutter (Frontend)
- MonsterASP.NET ASP.NET & .NET Cloud Hosting (Backend Deployment)
- .NET Core (Backend)
- Microsoft SQL Server (Database)
- FastAPI (AI Models Integration)
- Hugging Face (AI Models Deployment)

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DELIVERABLES / OUTPUT