

# Recitation 6: Design Project

MIT - 6.033

Spring 2022

Henry Corrigan-Gibbs

# Background

- \* Management system for electric utility.
- \* Smart Meter, microgrid controller, utility central

Two goals

- 1) Put solar power back in the grid
- 2) Microgrids — keep power on in local areas

+ Accounting

+ Research

# Design project

- It's big & complicated

- \* Like a paper, will not understand immediately
- \* Spec will change over time
- \* Broken down into pieces to be manageable
- \* You don't need to develop a sol'n now

- Why a design project

↳ Problems are complicated, messy, under-specified

↳ Teamwork is crucial

⇒ Amir shares experience with design project.



# Recitation Qs

1. What sort of challenges will come up?
  2. How will you address them?
  3. Why do we design large systems in teams?
- 

## FAQs:-

- Coding? No coding
- Pitfalls of other groups?
  - Communication
  - Legalistic reading of spec
- Scale for the future?

# Things to think about

- What question did you wish you had been asked? Maybe answer that one... follow your interest/excitement

- IMPACT of systems design on people

\* Who wins / who loses?

\* Who gains power (has) / who loses?

\* What are the possible futures in which this system is used?

- Evaluation: How will you know if the system is "working"?

↳ What does this even mean?

# In groups

- \* What are the goals?
- \* What are the modules/parts?
- \* What parts exist already vs need to be designed?

# Groups

How are "standard" design goals relevant here?

- Scalability
- Fault-tolerance
- Security
- Performance
- Interoperability