A Sample Set of Slides

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(w/ material from Stephen Boyd and Steven Diamond)

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Mathematical optimization

Outline

(mathy math)

optimization problem has form

$$\text{minimize} \quad f_0(x)$$
$$\text{subject to} \quad f_i(x) \leq 0, \quad i = 1, \ldots, m$$

- ▶ $x \in \mathbf{R}^n$ is **decision variable** (to be found)
- ▶ f_0 is objective function; f_i are constraint functions
- ▶ problem data are hid inside $f_0, \ldots, f_m$
- ▶ variations: add equality constraints, maximize a utility function, satisfaction (feasibility), optimal trade off

In the morning

Outline

Getting up

one	two	three
apple	beta	omega

- Turn off alarm
- Get out of bed

Breakfast

we need a way to represent math x^{π^2}

- ▶ Eat eggs
- ▶ Drink coffee

In the evening

Outline

Dinner

- Eat spaghetti
- Drink wine

Going to sleep

- Get in bed
- Count sheep