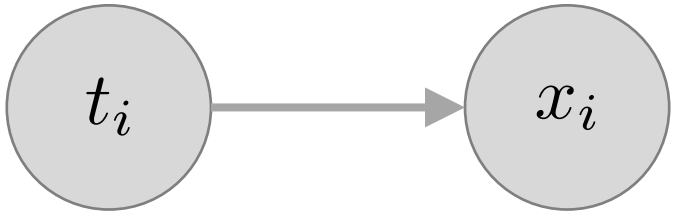
Summary of Expectation Maximization

- Method for training Latent Variable Models



Summary of Expectation Maximization

- Method for training Latent Variable Models
- Handles missing data

	High school grade	University grade	IQ score	Phone Interview
John	4.0	4.0	120	3/4
Helen	3.7	3.6	N/A	4/4
Jack	3.2	N/A	112	2/4
Emma	2.9	3.2	N/A	3/4

Summary of Expectation Maximization

- Method for training Latent Variable Models
- Handles missing data
- Sequence of simple task instead of one hard
- Guaranties to converge
- Helps with complicated parameter constraints

$$\Sigma_c \succ 0$$

^ positive semidefinite constraint.

Summary of Expectation Maximization

- Method for training Latent Variable Models
- Handles missing data
- Sequence of simple task instead of one hard
- Guaranties to converge
- Helps with complicated parameter constraints
- Numerous extensions:
  - Variational E-step: restrict the set of possible q (week 3 and 5)
  - Sampling on M-step (week 4)

Summary of Expectation Maximization

- Method for training Latent Variable Models
- Handles missing data
- Sequence of simple task instead of one hard
- Guaranties to converge
- Helps with complicated parameter constraints
- Numerous extensions

Cons

- Only local maximum (or saddle point)
- Requires math :)

hehehehe