

- ❗ **Threat** Wrong problem
- ✓ **Validate** Observe and interview target users

Domain situation

- ❗ **Threat** Wrong task/data abstraction

Data/task abstraction

- ❗ **Threat** Ineffective encoding/interaction idiom

Visual encoding

- ✓ **Validate** Justify encoding/interaction design

- ❗ **Threat** Slow algorithm

Algorithm

- ✓ **Validate** Analyze computational complexity

Implement system

- ✓ **Validate** Measure system time/memory

- ✓ **Validate** Qualitative/quantitative result image analysis

Test on any users, informal usability study

- ✓ **Validate** Lab study, measure human time/errors for task

- ✓ **Validate** Test on target users, collect anecdotal evidence of utility

- ✓ **Validate** Field study, document human usage of deployed system

- ✓ **Validate** Observe adoption rates