

Situation Detection

Sort of a wibbly wobbly topic

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What do we mean by “situation”?

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**A label we give to the present
by observing context**

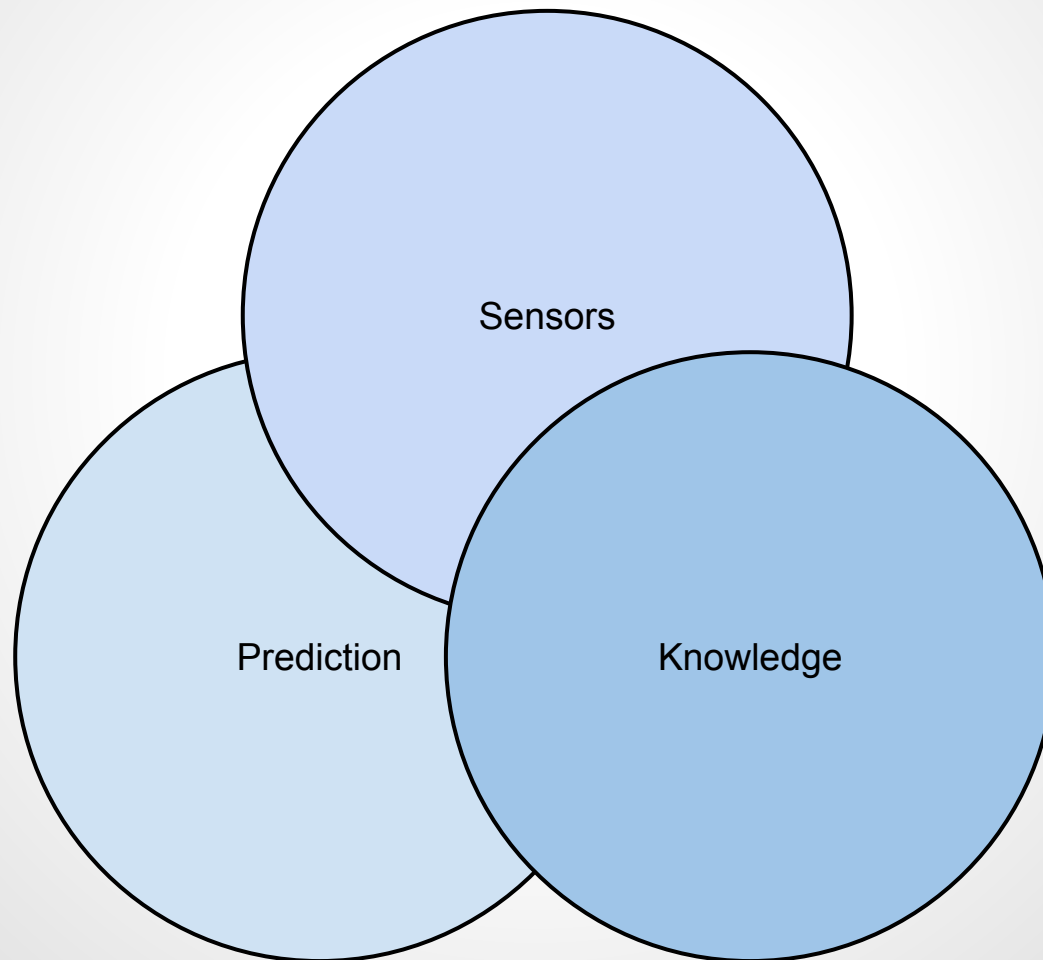
Well...how do we “observe” context?

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Sort of inaccurately

... And then we make our best guess.

Evidence when reasoning about situations



Sensors

{GPS,
Bluetooth,
Wifi,
Light,
Microphone,
etc.}

Knowledge

```
{User Gender,  
  User Age,  
  User Preferences,  
  Is a dog person(?),  
  User Education,  
  etc.}
```

Sensors

```
{GPS,  
  Accelerometer,  
  Bluetooth,  
  Wifi,  
  Light,  
  Microphone,  
  etc.}
```

Prediction

{Future Location,
Hungry/Content,
Will need knowledge,
Traffic Predictions,
Weather Predictions,
etc.}

Knowledge

{User Gender,
User Age,
User Preferences,
Is a dog person(?),
User Education,
etc.}

This data is still just evidence

**elements of context
used to label situations**

Example Situations

```
{User Playing Game,  
  User In Danger,  
  User Lost,  
  User Is Hanging Out,  
  User Is Sleeping,  
  etc.}
```

Supporting Papers

**Learning Situation Models for Providing
Context-Aware Services**

Brdiczka, Crowly, Reignier

**Modeling Situation Awareness for Context
aware Decision Support**

Feng, Teng, Tan

Modeling Both the Context and the User

Jameson

Learning Situation Models

Contributions:

- {Auto discovery - initial situations,
- Tie actions to situations,
- User assisted seeding of new sit.
- }

Modeling Situation Awareness

Contributions:

{Situations in Command and Control,
Decision automation by urgency,
User choice fallback
}

Modeling Both the Context and the User

Contributions:

```
{More than just sensor data,  
  User background knowledge,  
  User adaptive systems  
}
```