Fuzzy

The nature of uncertainty

- suppose you are teaching your child to bake cookies and you want to give instructions about when to take the cookies out of the oven.
- You could say to take them out when the temperature inside the cookie dough reaches 375 ◦F, or you could advise your child to take them out when the tops of the cookies turn *light brown.*

The nature of uncertainty

- If "**tall**" is a set defined as **heights** equal to or greater than 6 feet, a computer would not recognize an individual of height 5'11.999"
- If "**young**" is a set defined as **age** equal to or greater than 25.
- "**Cool**" temperature.

The nature of uncertainty

- Most of our traditional tools for formal modeling, reasoning, and computing are crisp, deterministic, and precise in character.
- Real situations are very often not crisp and deterministic, and they cannot be described precisely.

The nature of uncertainty

- Professor Zadeh, the guy who created Fuzzy Logic, says we humans don’t need an input that machines need, but we’re highly adaptive.