

# Artificial Intelligence Overview

# Artificial Intelligence Overview

Quote

„As soon as it works, no one calls it AI any more.”

John McCarthy

# Artificial Intelligence Overview

Present and Future

## Narrow AI

- Google Map
- Google Search

## Narrow AI

- Self-driving cars

## Broad (General) AI

- Computers pass Turing test
- Existential threat

- AI Assistant

Present

Near Future

Far Future???

# Artificial Intelligence Overview

## Artificial Intelligence and their subgroups

### Examples: AI Assistant

- Siri, Alexa, Cortana, Google Now
- Voice recognition systems use Machine Learning to imitate human interaction
- able to have „natural“ conversations indistinguishable from humans



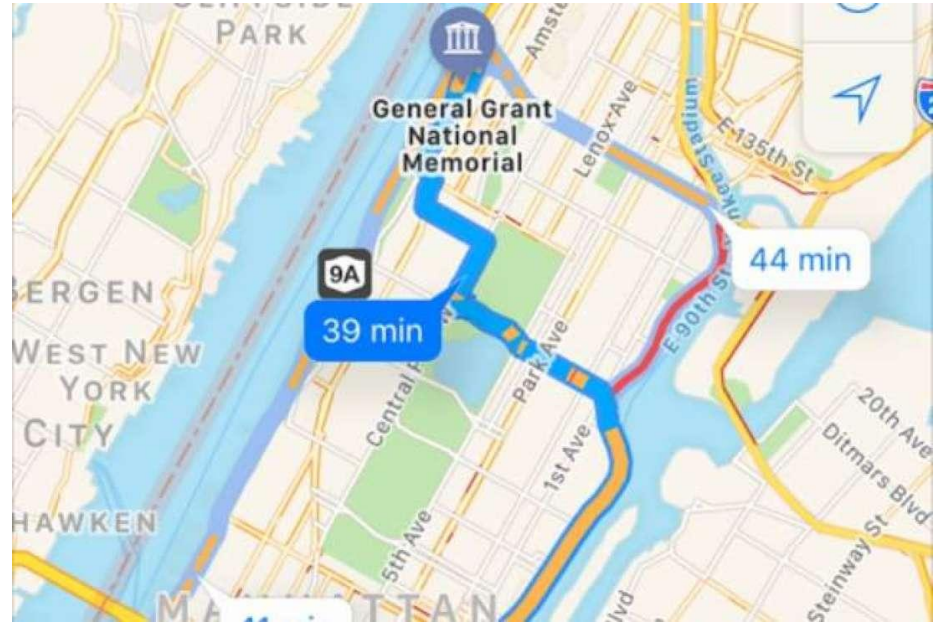
Source: [https://gigazine.net/gsc\\_news/en/20170305-alexasiri-cortana-all-female](https://gigazine.net/gsc_news/en/20170305-alexasiri-cortana-all-female)

# Artificial Intelligence Overview

Artificial Intelligence and their subgroups

Examples: Google Maps Traffic

- Analyses speed of traffic through anonymous location data from smartphones
- Reduces travel time by suggesting fastest routes



Source: <http://mentalfloss.com/article/92958/how-does-google-maps-know-where-traffic>

# Artificial Intelligence Overview

Artificial Intelligence and their subgroups

Examples: Google Search

- Biggest search engine
- Offers recommendations
- Suggestions based on previous user searches



Google-Suche

Auf gut Glück!

Künstliche Intelligenz von Google: [Hilfe in Not- und Katastrophenfällen](#)

Source: [www.google.de](http://www.google.de)

# Artificial Intelligence Overview

## Artificial Intelligence and their subgroups

- Artificial Intelligence
  - broadest term
  - Machines adapt to different situations
- Machine Learning
  - Statistical techniques provide computers ability to „learn“
- Deep Learning
  - Inspired by human brain
  - Artificial Neural Networks (ANNs) mimic structure of the brain
  - Discrete layers of neurons and connections of neurons make up an ANN

## Artificial Intelligence



## Machine Learning



## Deep Learning

