# Machines Solving Humanly Issues

# Thesis: Artificial intelligence, which is the center of technological development due to its recent and rapid development, is currently researched in every aspect and offers improvements and solutions in education systems, military industry and medicine.

# In education systems

## Benefits in academic education

### Supporting tutors technologically

#### Learning models (Cumming & Mcdougall, 2000, p. 202)

#### Marking and record keeping (Luckin, Holmes, Griffiths & Forcier, 2016, p. 31)

#### Technological teacher assistants (Luckin, etal., 2016, p. 31)

### Supporting self-learning

#### Improving educational computing (Cumming & Mcdougall, 2000, p. 199)

#### Learning foreign culture and language (Underwood & Luckin, 2011, p. 3)

#### Learning mathematics (Underwood & Luckin, 2011, p. 3)

#### Learning programming and database skills (Underwoor & Luckin, 2011, p. 4)

## Benefits in social education

### Supporting personalized motor skill learning (Santos, n.d., p. 3)

#### Novel interactive technology (Santos, n.d., p. 3)

#### Artificial intelligence in aikido (Santos, n.d., pp. 4-7)

### Robot peers and teachers

#### Learning a new language with Musio the robot (Moynihan, 2015, para 2-7)

#### Robot teaching calligraphy to children (“Calligraphy Robot Teaches Japan’s Schoolchildren The Art Of ‘Shodo’ Writing”, 2013, para 7-10)

# In military

## Applications of AI in military

### Defense against cyber crimes

#### Artificial neural network applications (Dilek, Çakır & Aydın, 2015, pp. 25-26)

#### Intelligent agent applications (Dilek etal., 2015, pp. 26-27)

#### Artificial immune system applications (Dilek etal. 2015, pp. 28-29)

#### Genetic algorithm and fuzzy sets applications (Dilek etal., 2015, pp. 29-30)

### Applications of AI in warfare

#### Pilot's associate (Akgül, n.d., p. 266)

#### Naval battle management (Akgül, n.d., p. 267)

## Benefits of unmanned vehicles

### Autonomous Weapon Systems (Lin, Bekey, & Abney, 2008, p. 4)

#### Collecting and processing data faster than humans (Adviesraad Internationale Vraagstukken, 2015, p. 11)

#### Operating in conditions where it is impossible for humans to function (AIV, 2015, p. 11)

#### Operating in environments without communication (AIV, 2015, p. 11)

### Unmanned Aircraft Systems (Austin, 2010, p.2)

#### Make citizens safer, more secure and more productive (Association for Unmanned Vehicle Systems International, n.d., para 4)

#### Saves lives in the event of natural disasters (AUVSI, n.d. para 4)

#### Enhancing public safety (AUVSI, n.d., para 5)

# In Medicine

## Collecting data and improving

### Machine Learning (Machine Learning A Probabilistic Perspective Kevin P. Murphy The MIT Press)

#### Deep Learning (LeCun, Bengio & Hinton, 2015)

#### Neural Networks (Gershenson, n.d )

### Mining medical records (Cios & Moore, 2002)

#### Heterogeneity of medical data (Cios & Moore, 2002, pp. 2-8)

#### Data mining and knowledge discovery process (Cios & Moore, 2002, pp. 14-20)

#### Special status of medicine (Cios & Moore, 2002, pp. 20 – 21 )

## Applying data on healthcare system

### Diagnosing disease (Amato, 2013, pp.51-56)

#### ANN in medicine (Amato, 2013, pp.51-56)

#### Fuzzy expert systems (Ramesh , C Kambhampati , JRT Monson , PJ Drew, 2004, p.336 )

### Treating disease (SHORTLIFFE, AXLINE, BUCHANAN, MERIGAN &COHEN, 2013, p.544 )

#### Stategy (Shortlife et al., 2013, p.546)

#### Eliza and related works (Shortlife et al., 2013, p.544)

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