Search, Navigate, and Actuate

Overview

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Objectives

- Integrate the knowledge and skills acquired in the 1th year
- Initiate skills to plan, manage, execute and report a software project
- Introduce the knowledge needed for robotics

Program

1th Week: Search
Find the next move for a chess playing robot

2nd Week: Navigate
Translate the move to movements of a piece

3rd Week: Actuate
Translate the piece movements to arm movements

4rd Week: Play
Do something nobody has done before

Schedule

10.00-12.30: Practicum

Assistant will introduce the new assignment

13.00-15.00: Lecture

Knowledge needed for the task

15.30-17.00: Project

Work together on the assignment

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Grade

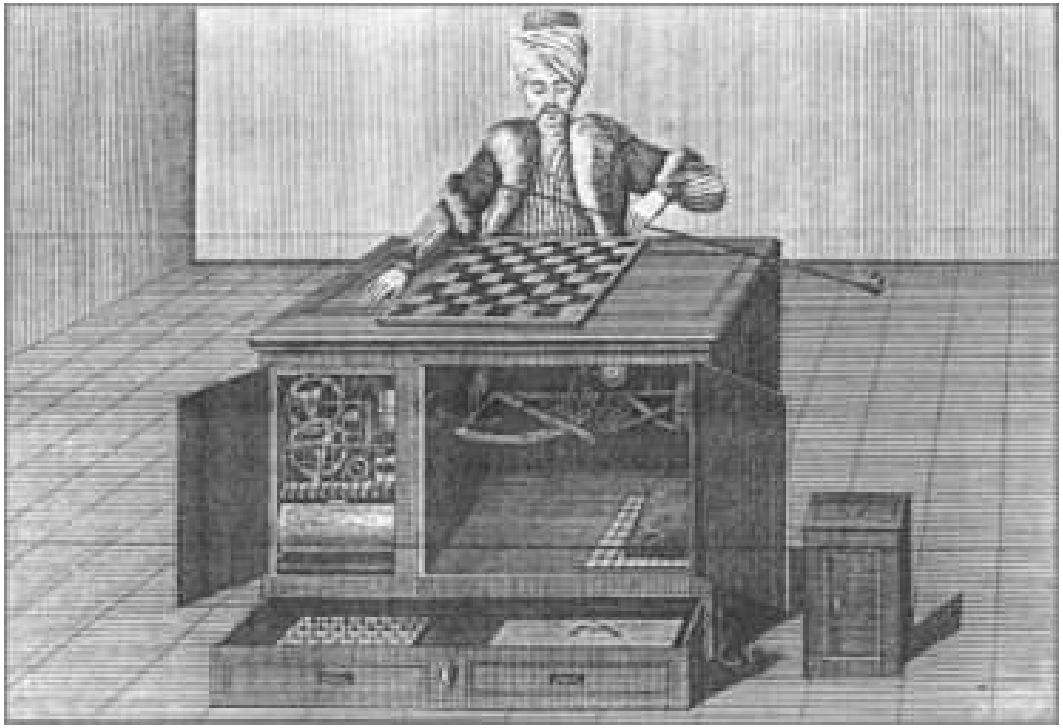
1th Week: Programming skills
Olaf Booij will grade your implementation of the chess endgame

2nd Week: Knowledge
Leo Dorst will test your understanding of the syllabus

3rd Week: Practical skills
Olaf Booij will grade your demonstration and report of the chess playing robot

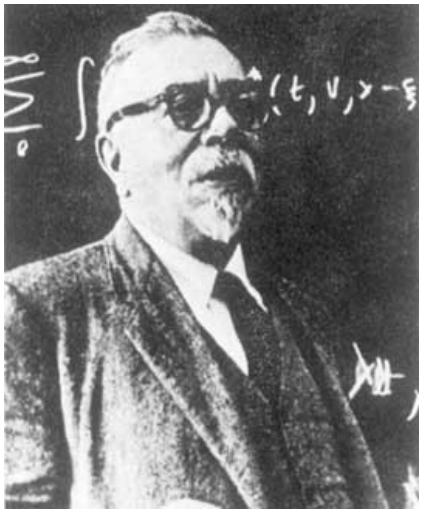
4rd Week: Experimental skills
Arnoud Visser will grade your demonstration and labbook of your survey

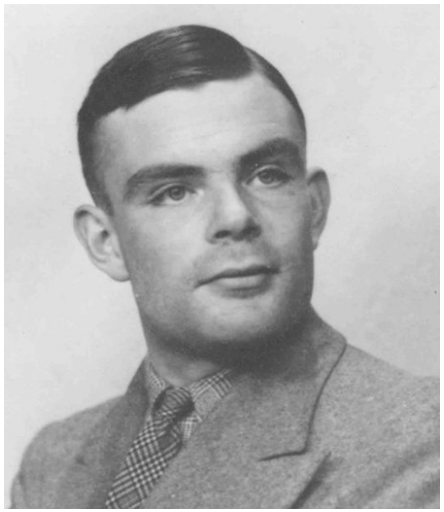
Classical problem in AI



The chess-playing Turk defeated Napoleon in 1769

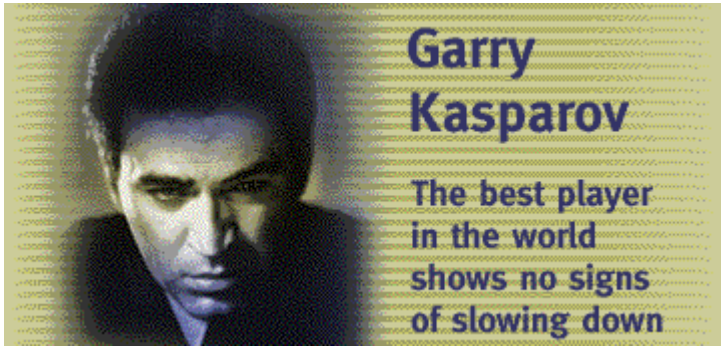
Many famous researcher contributed





- Norbert Wiener (1948) introduced a design for a chess program including minimax
- Alan Turing (1951) wrote first full chess program
- John McCarthy (1956) conceived alpha-beta search

AI has ‘solved’ the problem



Deep Blue wins with 3½-2½ in 1997

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Now it is your turn:

Have fun!

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