



**Pusat Pengajian
Pengkomputeran**
School of Computing

Universiti Utara Malaysia

SOC Majoring Talk Workshop

13 Dec. 2016 | DKG 4/1 | Organized by: Itech Club



A.I. the revolution in
computing

Wan Hussain Wan Ishak

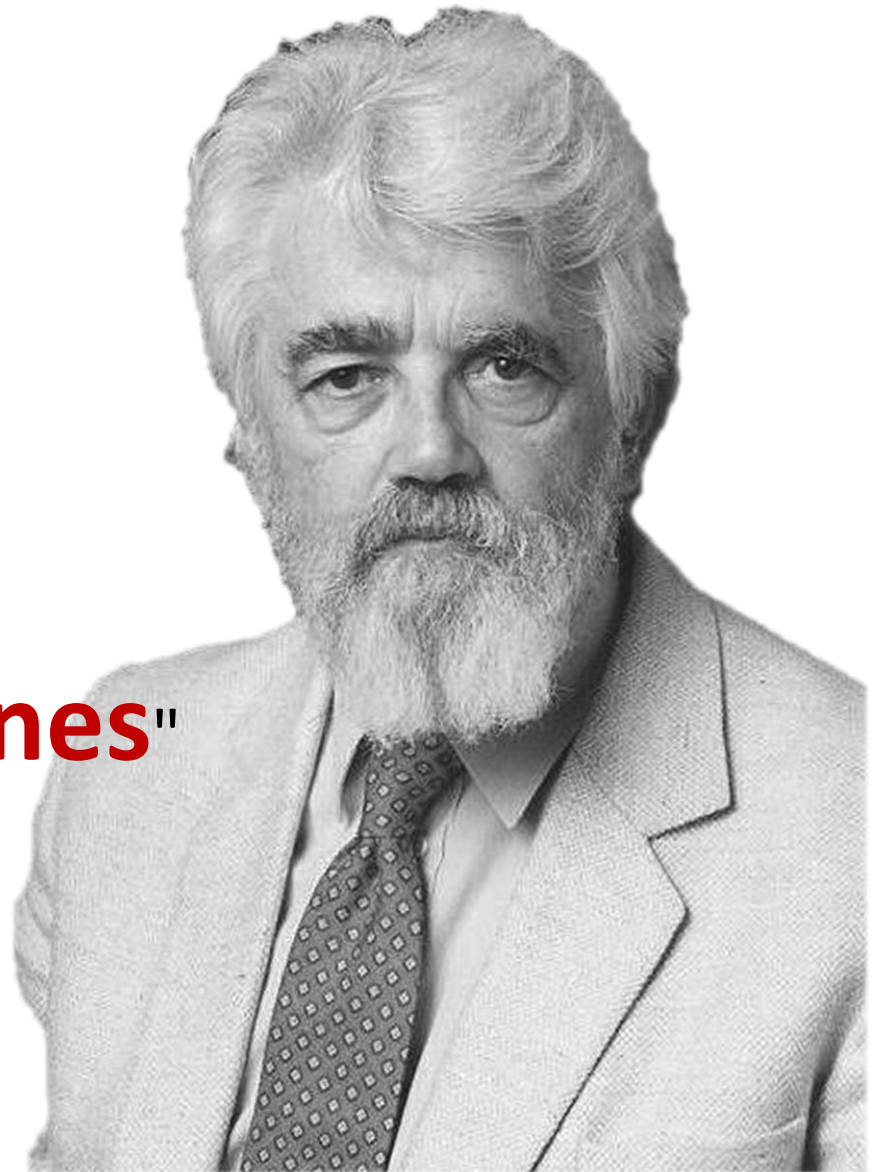
Ext: 5150 | Email: hussain@uum.edu.my | Website: wanhussain.com

A.I.

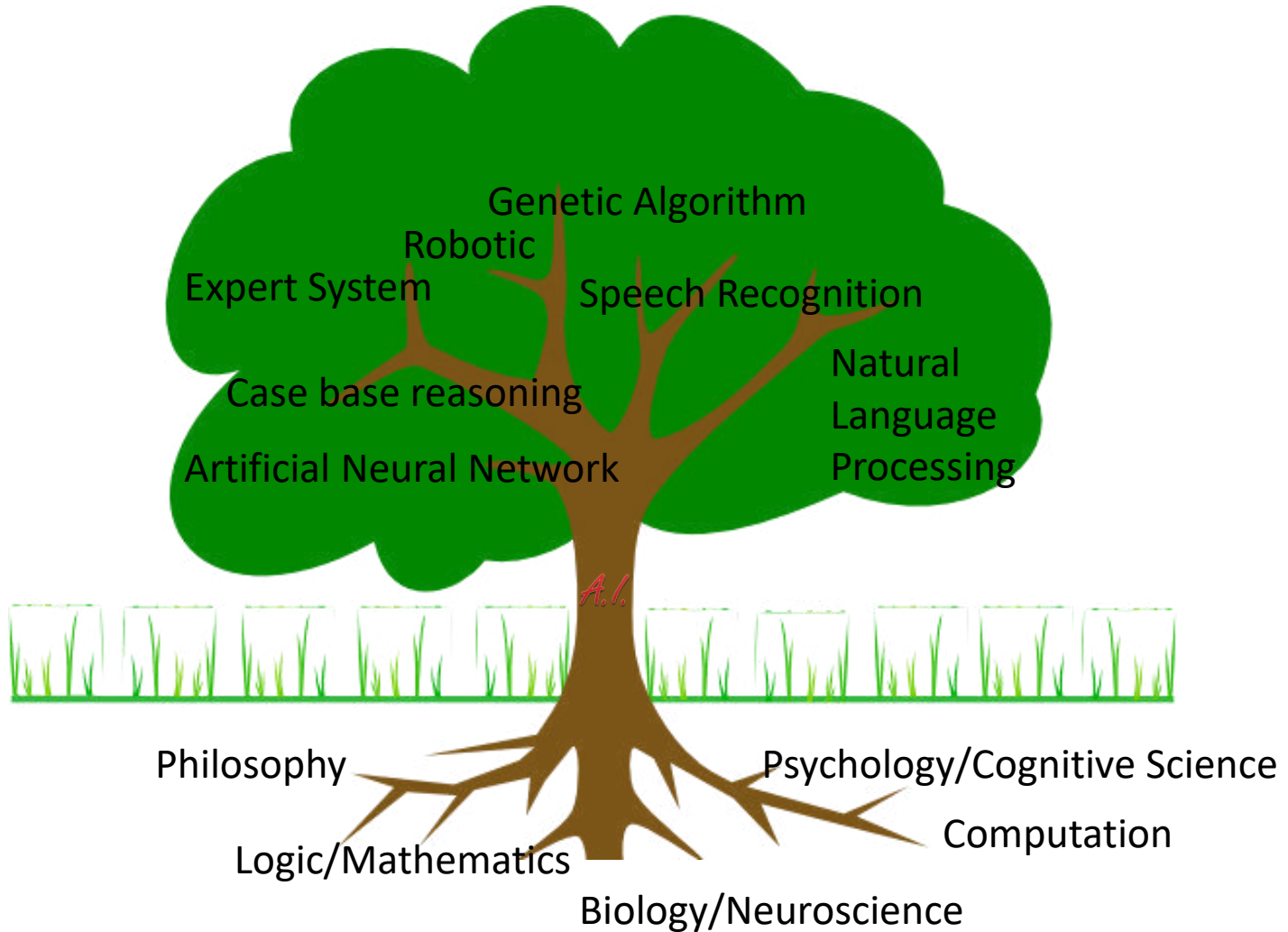
What? Who?

"the **science** and
engineering of making
intelligent machines"

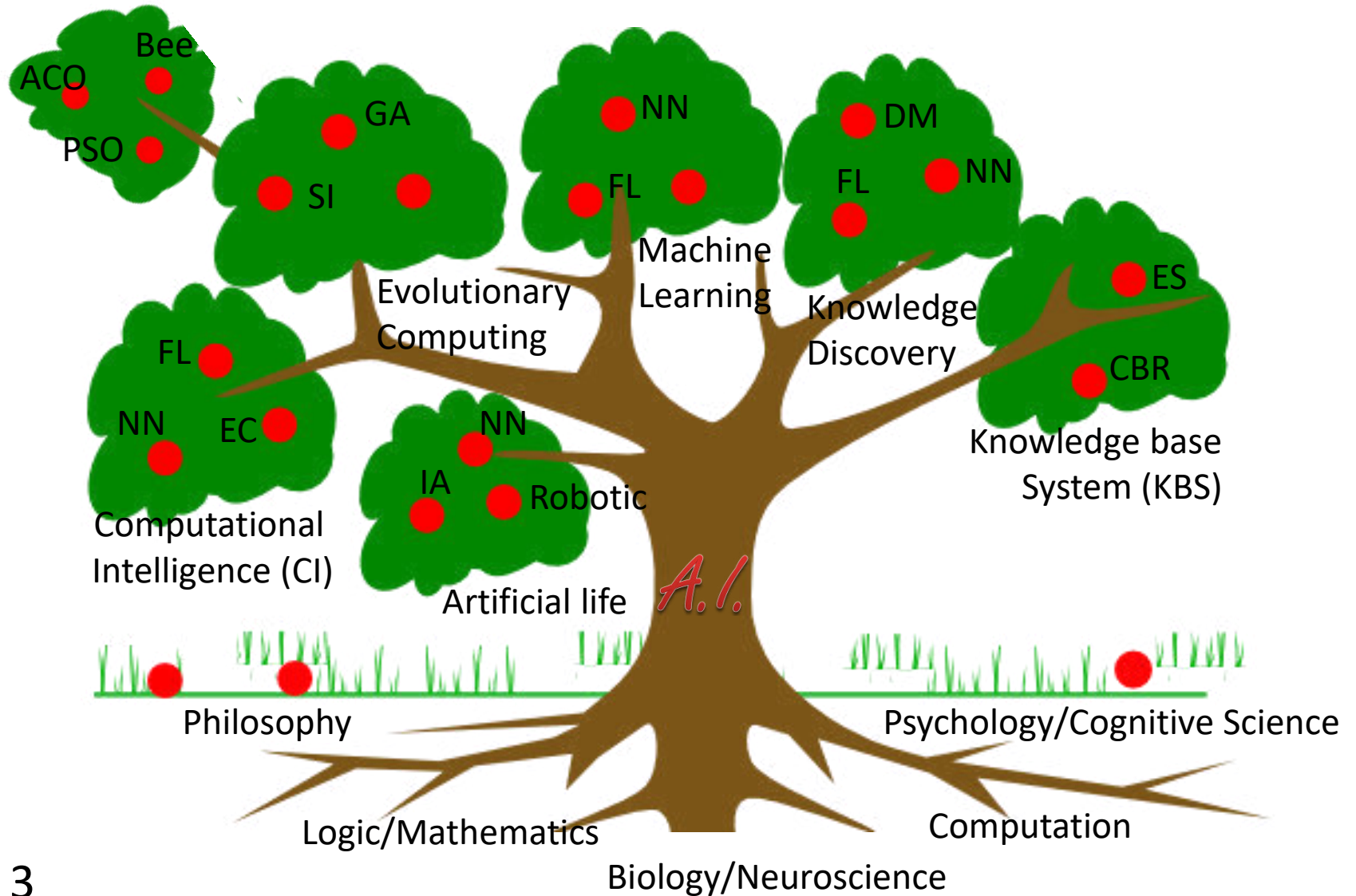
John McCarthy, 1956



AI Tree (Old days)



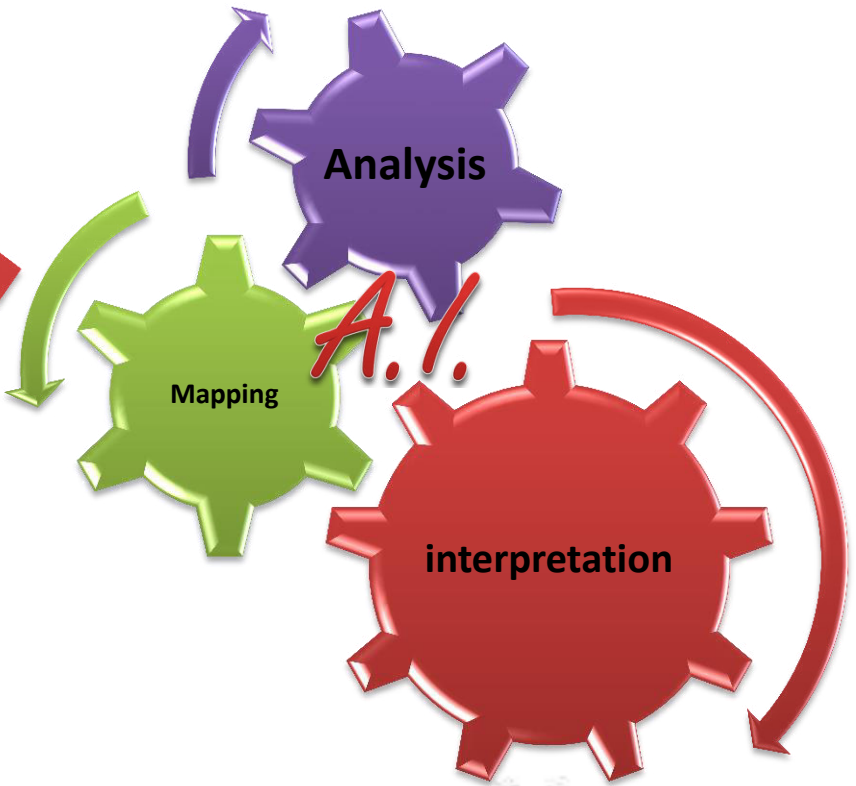
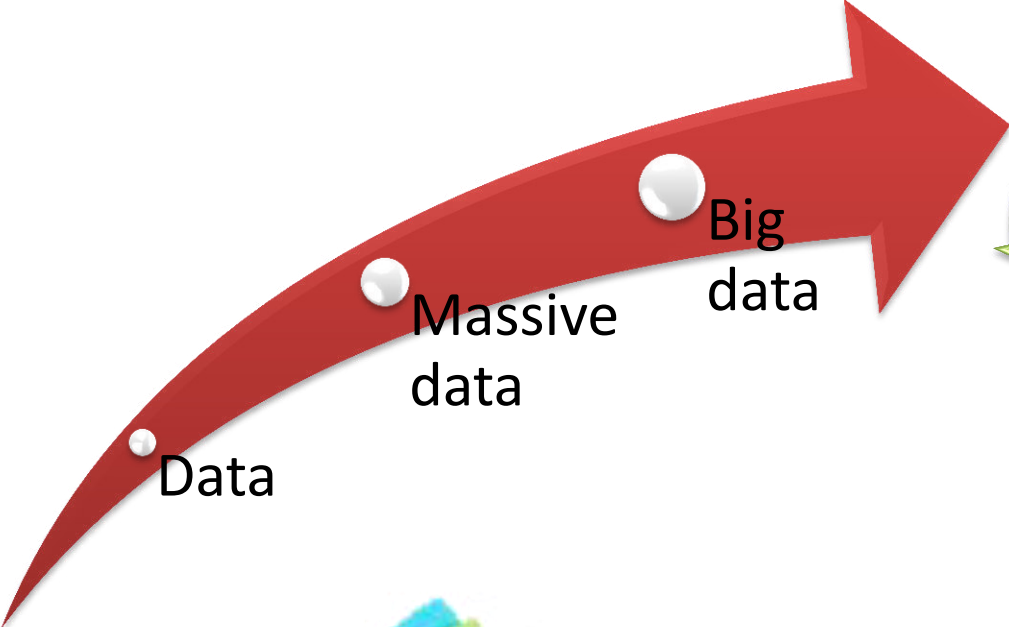
AI Tree (New)



Loosing jobs? Video.

Artificial Intelligence
Will Replace Your Job in
15 Years

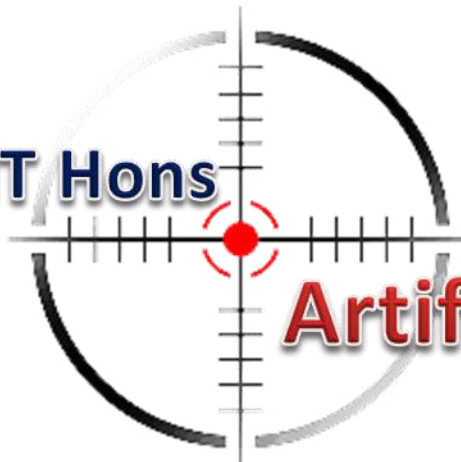
The Role



~~Plan A~~
Plan B




SOC Initiative



BSc IT Hons

Artificial Intelligence



**Pusat Pengajian
Pengkomputeran**
School of Computing

Universiti Utara Malaysia

Components in BSc.IT(Hons)

Science of Thinking and Ethics
Foundations of Finance
Programming I
Programming II
Data Structures and Algorithm Analysis
Database System & Information Retrieval
Systems Analysis and Design
Information Technology Project Management
Research Methodology In IT
Basic Networking
Computer System Organization
Operating System
Introduction to Artificial Intelligence
Human Computer Interaction
Mathematics for Information Technology
Discrete Structure
Statistics for Information Technology
Project 1 & Project 2
Practicum

Skills

Programming

Systems and Database

IT Management

Networking

AI and HCI

Quantitative courses

Application

Components in BSc.IT(Hons)

Skills

Programming

Systems and Database

IT Management

Networking

AI and HCI

Quantitative courses

Application



Components in BSc.IT(Hons) + AI

Science of Thinking and Ethics
Foundations of Finance
Programming I
Programming II
Data Structures and Algorithm Analysis
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Systems Analysis and Design
Information Technology Project Management
Research Methodology In IT
Basic Networking
Computer System Organization
Operating System
Introduction to Artificial Intelligence
Human Computer Interaction
Mathematics for Information Technology
Discrete Structure
Statistics for Information Technology
Project 1 & Project 2
Practicum

Compulsory:

- Knowledge Discovery in Database
- Neural Networks
- Logic Programming
- Machine Learning
- Knowledge Engineering & Expert Systems

Elective:

- Natural Language Processing
- Intelligent Agent
- Fuzzy Logic System
- Genetic Algorithm

Components in BSc.IT(Hons) + AI

Skills

Programming

Systems and Database

IT Management

Networking

HCI

Artificial Intelligence

Quantitative courses

Application

Problem Solving

Higher Thinking Skills

Planning

Decision Making

Complex Solution



Enhanced Capabilities

Components in BSc.IT(Hons) + AI

New Skills

Intelligent Data Analysis

Design & Develop Intelligent System

Intelligent Decision Support System

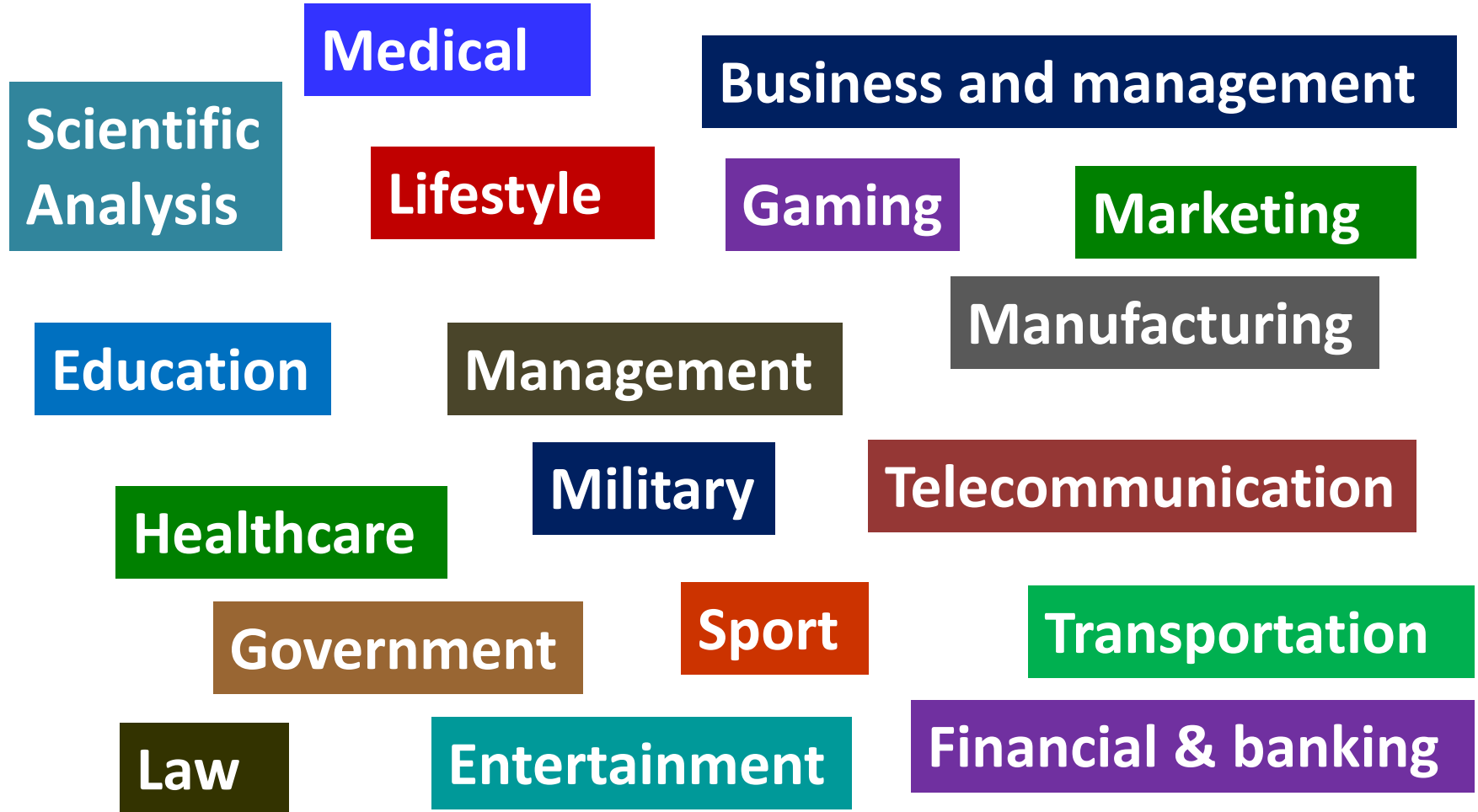
Predictive & Classification System

Human Comp/Machine Interaction



Bigger Job Scope

Where A.I can play active roles?



AI in Movie



AI in Movie



AI in Research

...focus attention not only on making AI more **capable**, but also on **maximizing** the **societal benefit** of

A.I.

AI in Research



Research | Team | Get Involved | Donate | Blog

New paper: “Exploratory engineering in artificial intelligence”

August 22, 2014 | [Luke Muehlhauser](#) | [Papers](#)

Luke Muehlhauser and Bill Hibbard have a new paper (PDF) in the September 2014 issue of *Communications of the ACM*, the world’s most-read peer-reviewed computer science publication. The title is “[Exploratory Engineering in Artificial Intelligence.](#)”

Excerpt:

We regularly see examples of new artificial intelligence (AI) capabilities... No doubt such automation will produce tremendous economic value, but will we be able to *trust* these advanced autonomous systems with so much capability?

Today, AI safety engineering mostly consists in a combination of formal methods and testing. Though powerful, these methods lack foresight: they can be applied only to particular extant systems. We describe a third, complementary



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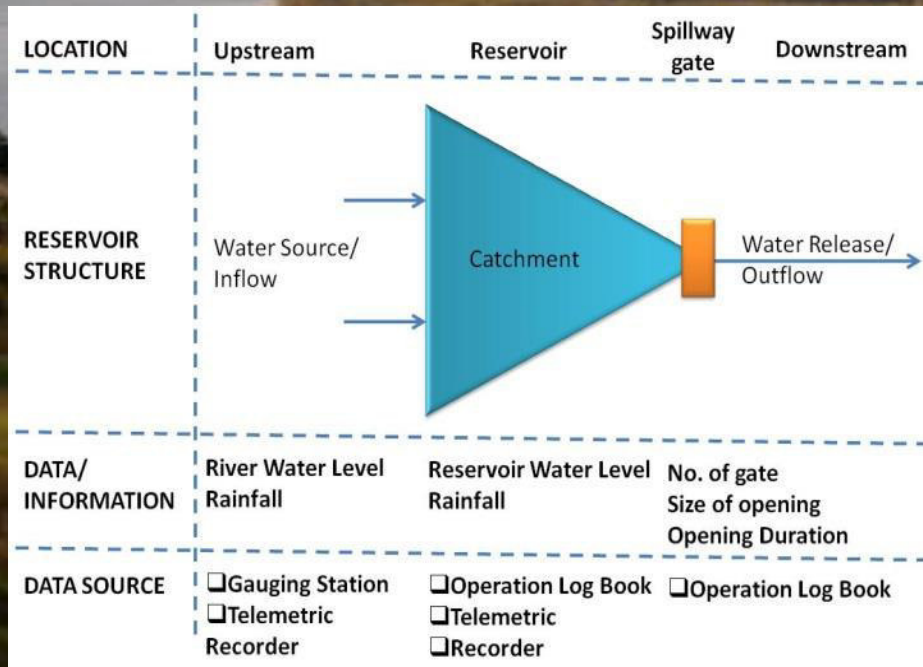
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AI in Research

Reservoir Water Release Decision Modeling



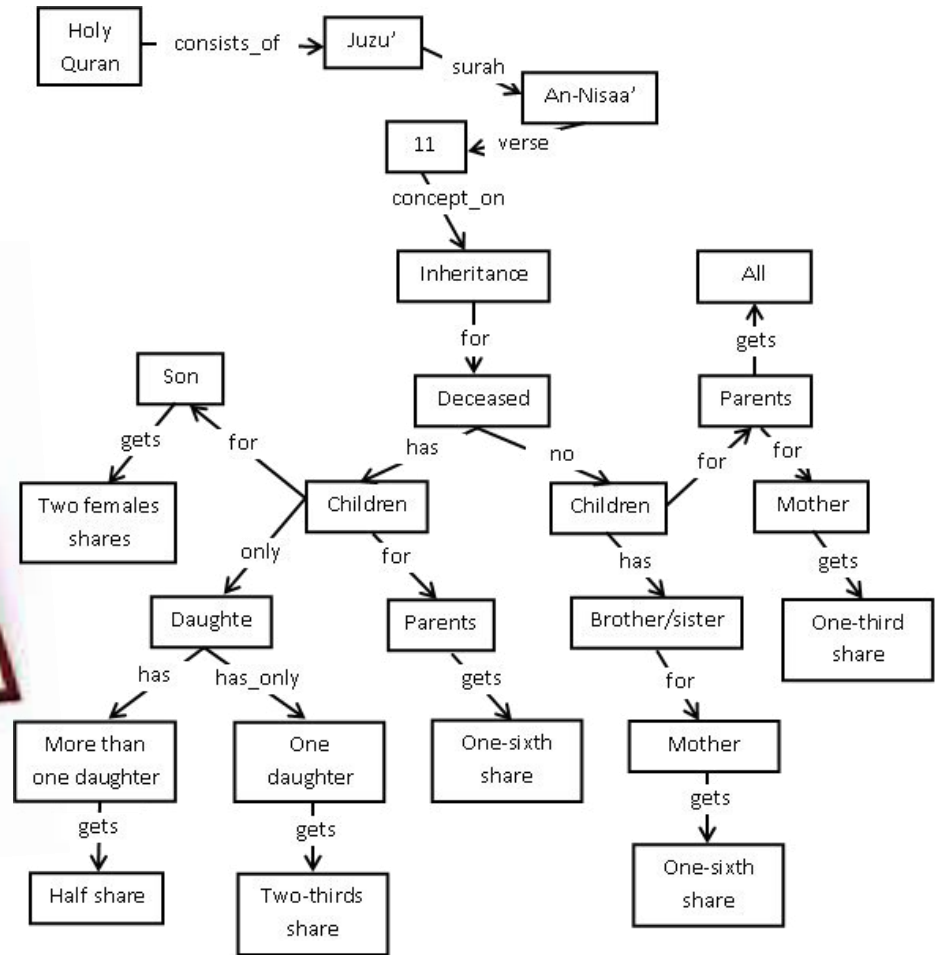
AI in Research

Practicum Student Placement Pattern



AI in Research

Knowledge Representation from the Holy Quran



AI in Reality

We **use** AI all the time in our **daily lives**, but we often **don't realize** it's

AI!

AI in Reality



Foam detector
Adjust rinse length
Dosage evaluator
Load adjuster
Economical wash

SURF EXCEL MATIC
Approved
by **moms**

Being Fuzzy is being Smart!

A purple graphic overlay featuring a thought bubble with a list of AI features: "Foam detector", "Adjust rinse length", "Dosage evaluator", "Load adjuster", and "Economical wash". To the left of the bubble is a lightbulb icon. Below the bubble is a white line-art sketch of a washing machine. To the right is the "SURF EXCEL MATIC Approved by moms" logo. At the bottom of the graphic is the slogan "Being Fuzzy is being Smart!".

AI in Reality

HOME
REVOLUTION

Tefal
Ideas you can't live without.

1.8L RICE COOKER
FUZZY ELECTRONIC LOGIC
RK7035

820W

Capacity: 1.8L

Automatic
keep warm

Removable inner lid
- easy to clean



AI in Reality

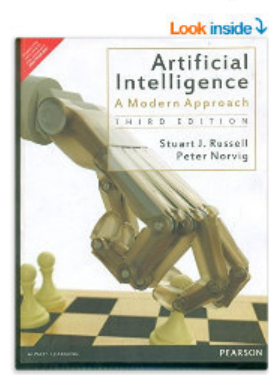
The Google logo is centered on the page, featuring its characteristic multi-colored letters: a blue 'G', a red 'o', a yellow 'o', a green 'g', and a red 'l'.A long, empty search input field with a thin grey border, positioned centrally below the logo.

Google Search

I'm Feeling Lucky

AI in Reality

Back to search results for "artificial intelligence"



Artificial Intelligence: A Modern Approach Paperback – 2015

by Stuart Russell (Author)
★★★★☆ 129 customer reviews

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Resonance: Guidelines for the End of the Human Era...
Resonance will attempt to answer every question related to interactions, life, the mechanics of consciousness, faith, origins, and all of reality.

Ad feedback

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Data Mining, Natural Language Processing

Thank you Wan Hussain Wan Ishak

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