ARTIFICIAL INTELLIGENCE (AI)

OSGOODE OUTREACH

Presented By:

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A QUICK BACKGROUND…

- I got dragged into learning about AI unintentionally when I was working for a bank in Calgary in the early 1980s;
- My boss sent me to San Francisco to attend a course on Emerging Technologies in December 1984 which included AI;
- He neither had a clue, nor did he care about the course: He thought I deserved a break and he insisted I take my family with me; and
- Guess what? I got hooked.

A QUICK BACKGROUND…

- When I graduated in 1988, we were living in Scarborough, Ontario, and people hardly knew about Artificial Intelligence (AI);
- Some of our friends knew that the topic of my thesis was “AI” but they were not curious enough to find out what AI stands for; and
- Some of those friends were also a part of a Special Interest Group in town and one day I got an invitation from them to speak at their monthly meeting on the subject of ARTIFICIAL INSEMINATION (AI).

PRESENTATION AGENDA …

1. A Brief History of AI;
2. What Is AI?
3. How Does AI Work;
4. Advantages/Disadvantages of AI;
5. The Abuse of AI Technology;
6. How Bad Are AI Data Centers;
7. Is AI a Threat;
8. Closing Argument; and
9. QUESTIONS/ANSWERS.

1. A BRIEF HISTORY OF AI …

- Artificial Intelligence has evolved from simple rule-based programs into powerful systems that can learn from data and generate new content; and
- Its history reflects the rapid development of computing, data, algorithms, and machine learning, and AI continues to develop rapidly today.

1. A BRIEF HISTORY OF AI …

- Alan Turing (British Citizen) was a computer scientist who called AI in:
  - 1936 The Turning Machine;
  - 1940s Machine Intelligence;
  - 1950 Computing Machine and Intelligence; and
  - 1950 Learning Machine.
- John McCarthy (American), a computer Scientist, coined AI to describe the field of making machines perform tasks associated with human intelligence in I956.

1. A BRIEF HISTORY OF AI?…

- A VIDEO:
- Title: A Brief History of AI
- Source: Future with Fawzi
- Time: 2:36 Minutes
- A Brief History

2. WHAT IS AI? …

- AI is neither inherently a curse nor a cure;
- It is an extremely powerful amplifier of human capabilities—and potentially of human mistakes; and
- AI is a technology that enables computers and machines to perform tasks that normally require human intelligence.

2. WHAT IS AI?…

- A VIDEO:
- **Title:** What is AI?
- **Source:** Learn Free
- **Time:** 2:04 Minutes
- What is AI

3. HOW DOES AI WORK? …

- AI works by learning patterns from large amounts of data using mathematical models;
- During training, the AI analyzes examples and adjusts its internal parameters to recognize patterns and relationships; and
- When given new information, it uses what it has learned to make predictions, generate responses, solve problems, or perform tasks.

3. HOW DOES AI WORK? …

- A VIDEO:
- **Title:** How AI Really Works?
- **Source:** Tech Pulse TV
- **Time:** 3:51 Minutes
- How AI Really Works

4. ADVANTAGES OF AI …

- Saves time by automating repetitive tasks;
- Improves accuracy in many data-based tasks;
- Works 24/7 without needing breaks;
- Helps in decision-making by analyzing large amounts of data; and
- Supports learning and productivity through personalized assistance.

4. DISADVANTAGES …

- Job displacement as some tasks become automated;
- Privacy risks from collecting and processing personal data;
- Bias and errors can occur in AI-generated results;
- High development costs for advanced AI systems; and
- Overdependence on AI may reduce human skills and critical thinking.

4. ADVANTAGES/DISADVANTAGES …

- A VIDEO:
- **Title:** Advantages & Disadvantages of AI
- **Source:** CT Academy
- **Time:** 2:33 Minutes
- How AI Impacts our Environment

5. THE ABUSE OF AI TECHNOLOGY …

- Using AI for harmful, unethical, or illegal purposes;
- Examples include spreading misinformation and deepfakes, creating scams and fraud, invading privacy, cyberattacks, manipulating people, and generating harmful or discriminatory content;
- AI can also be misused to automate wrongdoing on a large scale; and
- Therefore, responsible use, strong regulations, and human oversight are important to reduce its risks.

5. THE ABUSE OF AI TECHNOLOGY …

- A VIDEO:
- Title: All Leads to Arrest
- Source: NBC 6 South Florida
- Time: 2:45 Minutes
- All Leads to Arrest

6. HOW BAD ARE AI DATA CENTERS?…

- AI data centers can have significant environmental impacts;
- They use large amounts of **electricity and water**, **produce Greenhouse-Gas Emissions**, and **generate heat and electronic waste**;
- Their impact depends on how the electricity is produced and how efficiently the data center operates; and
- Overall, AI data centers can be harmful to the environment, but renewable energy, efficient cooling, and better hardware recycling can reduce their impact.

6. HOW BAD ARE AI DATACENTERS? …

- A VIDEO:
- **Title:** HOW AI DATACENTERS WORK AND WHY AI IS DRIVING THEIR GROWTH
- **Source:** AP ARCHIEVE
- **Time:** 1:38 MINUTES
- Introducing Devin Desktop

7. IS AI A THREAT? …

- There is an important paradox here;
- The same technology that creates these risks could also help solve them and AI could significantly accelerate:
  - Climate Modelling and Mitigation;
  - Medical Diagnosis and Drug Discovery;
  - Scientific Research;
  - Renewable-energy Optimization;
  - Disaster Prediction;
  - Education and Personalized Learning; and
  - Productivity and Economic Growth.

7. IS AI A THREAT? …

- A VIDEO:
- **Title:** Real Threat of AI
- **Source:** TEDx Stanford 2025
- **Time:** 1:40 Minutes
- Real Threat of AI

8. CLOSING ARGUMENT …

- The critical challenge is:
  - Can humanity develop the wisdom, safeguards and governance to control a technology that is becoming increasingly powerful?
- Bottom line:
  - The greatest risk may not be AI itself—but humans using powerful AI without sufficient responsibility, oversight and accountability.

8. CLOSING ARGUMENT …

- A VIDEO:
- Title: THE TURBULENT ERA OF AI IS HERE
- Source: BILL GATES
- Time: 1:52 MINUTES
- The turbulent era of artificial intelligence is here

QUESTIONS/ANSWERS

HERE'S A LIST OF ARTICLES ON THE SUBJECT …

- ARTIFICIAL INTELLIGENCE | A Book: Nuclear Energy – Peaceful Ways to Serve Humanity.