

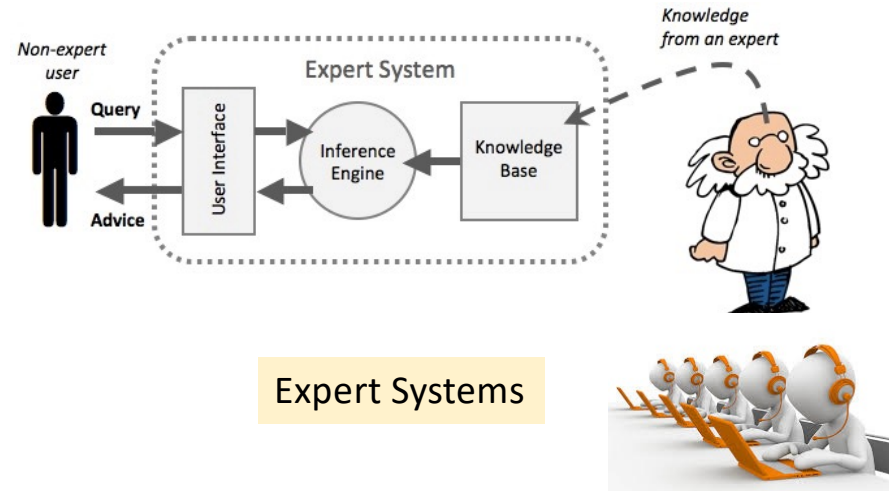
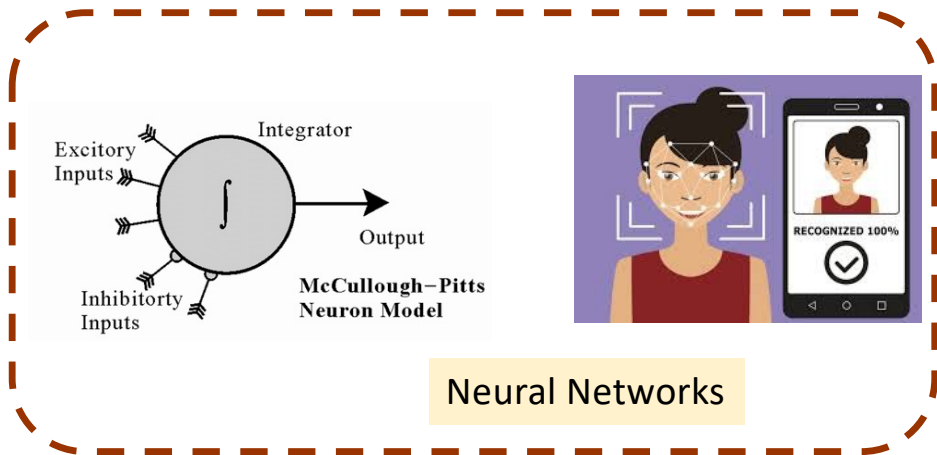


AI Risks and Emergency Management

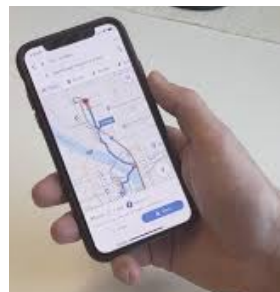
Tuesday 7th December
10:35

Thomas V. Robertson, Ph.D., Thinking Teams
www.thinking-teams.com

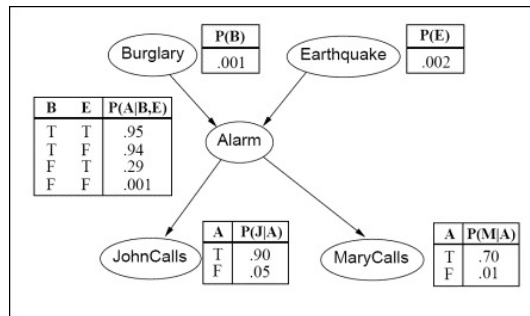
AI Automates Tasks Requiring Human Intelligence



- $\neg(p \vee q) \rightarrow \neg p$
 - 1. $A \rightarrow (A \vee B)$
 - 2. $p \rightarrow (p \vee q)$
 - 3. $(A \rightarrow B) \rightarrow (\neg B \rightarrow \neg A)$
 - 4. $(p \rightarrow (p \vee q)) \rightarrow (\neg(p \vee q) \rightarrow \neg p)$
 - 5. $\neg(p \vee q) \rightarrow \neg p$
- Q. E. D.



Symbolic Logic



Mathematical Statistics



Today, AI is Everywhere



Recommendations



Infrastructure



Automation



Facial recognition



Language



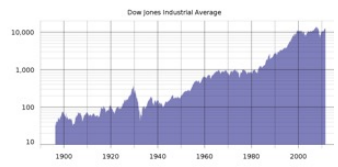
Autonomous vehicles



Deep Neural Networks (DNNs) Dominate AI Today



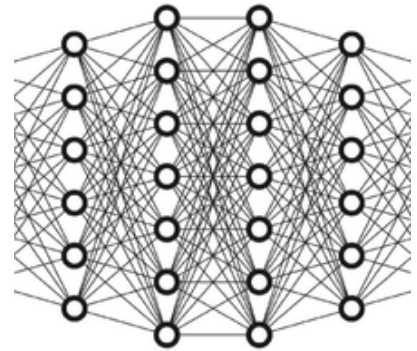
Battery is amazing but the phone has bleeding screen problem due to which double tap and touch is not responding correctly. The design seems decent with the 6.5 inch display; and robust quality. Overall, it is a good budget phone.



Input

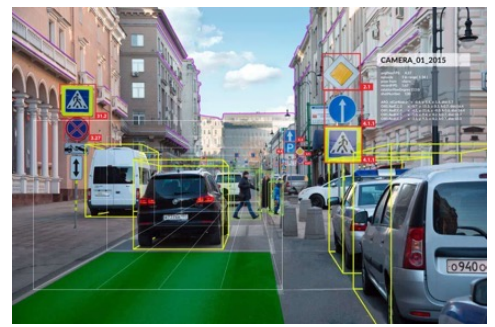
0
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0
1
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Deep Neural Network

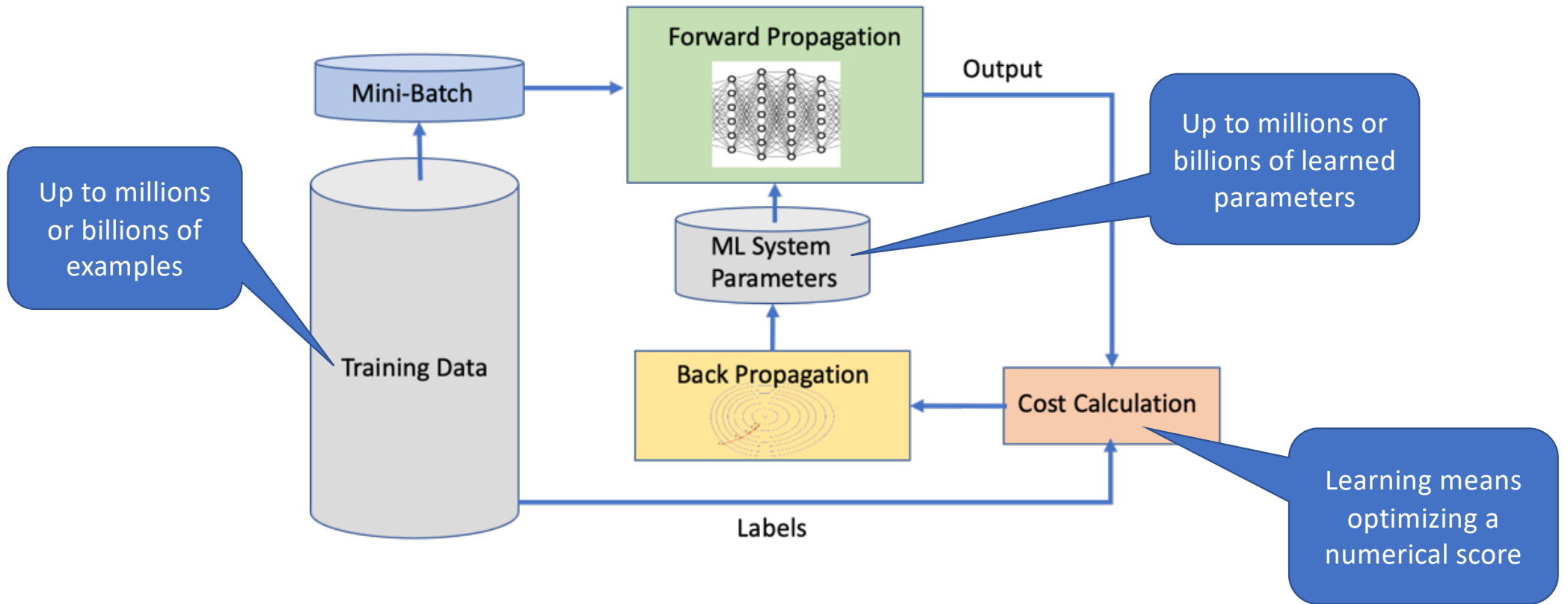


Output

01010
10001
10011
11100
00011
00110



DNNs 'Learn' Everything from Training Data



AI Risks



Failure in novel situations



Bias



Polarization



Infrastructure vulnerability



Lethality



Control



Unemployment



Mitigating AI Risks



Policies, laws, and standards



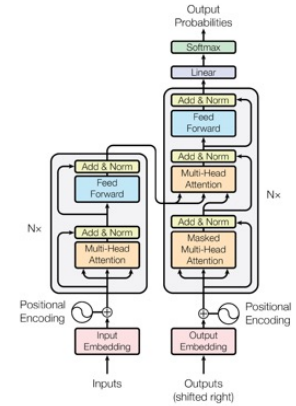
Safety protocols and procedures



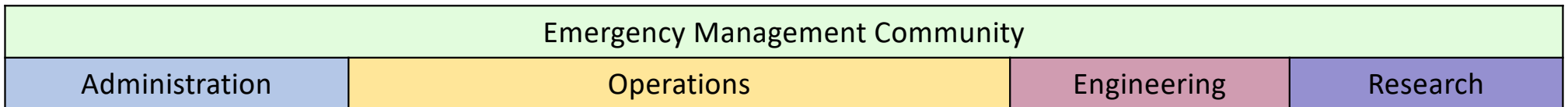
Testing and rehearsal



Alerting and backup systems



Safer AI designs



Conclusions

- AI technology is having an increasing impact on society
- The use of AI carries with it the risks of failure, unintended consequences, and malicious use
- The EM community has an opportunity to contribute to mitigating the risks associated with the use of AI through administration, operations, engineering, and research

