

Machine Learning

**Hafiz Muhammad
Attaullah**

Applications of Machine Learning

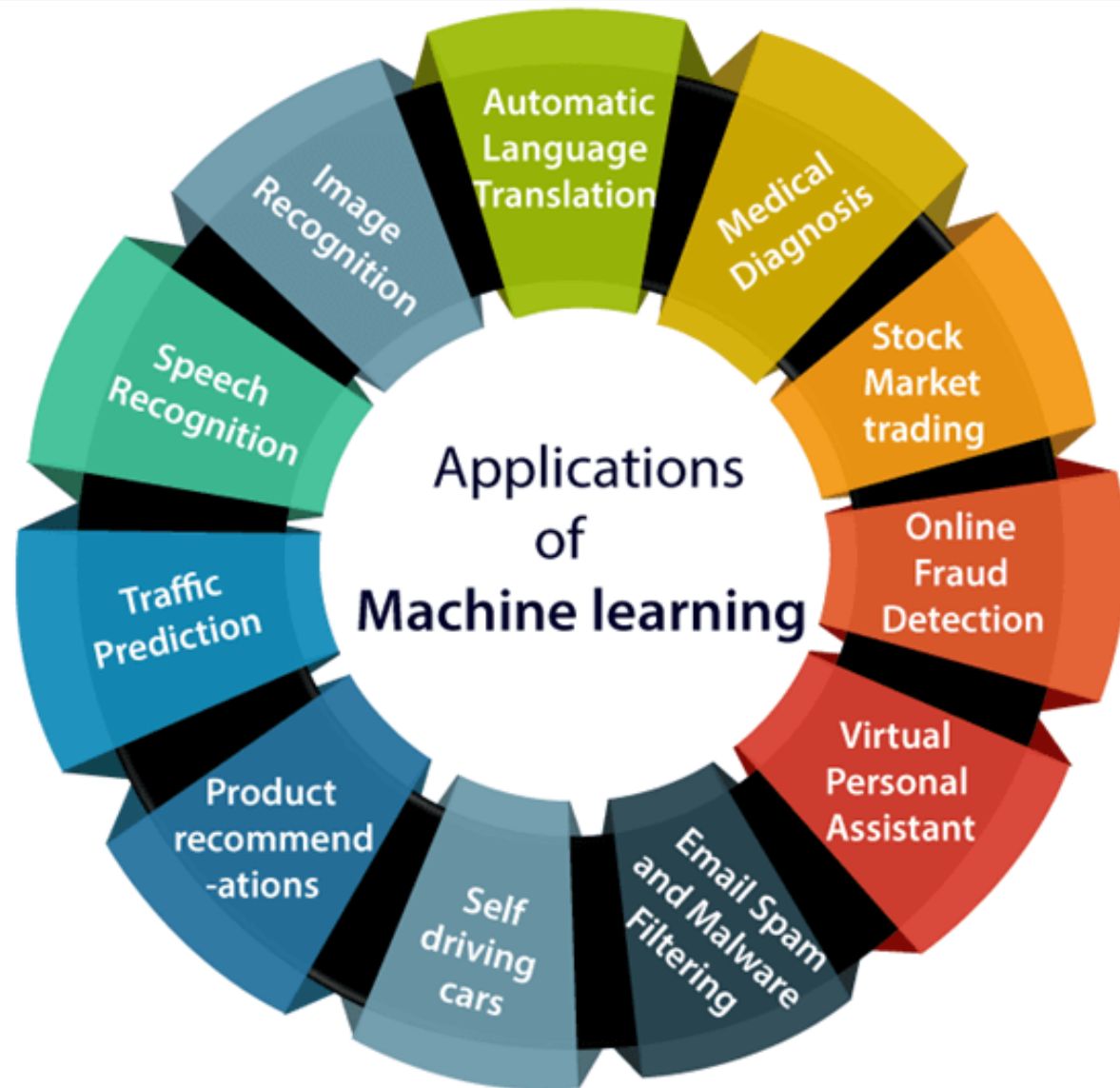
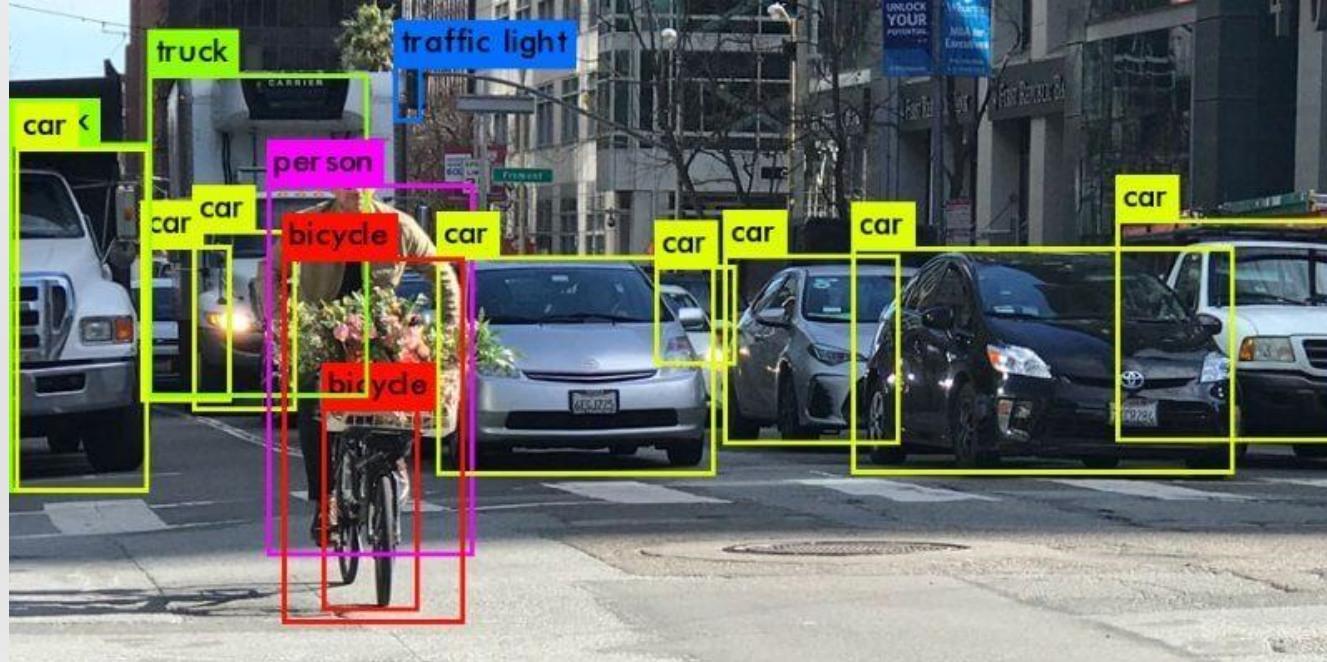


Image Recognition

- To identify objects, persons, places, digital images, etc
- Automatic friend tagging suggestion
- Deep Face



Speech Recognition

- Search by voice
- Speech to text
- Computer Speech Recognition
- Google Assistant
- Siri
- Cortana
- Alexa

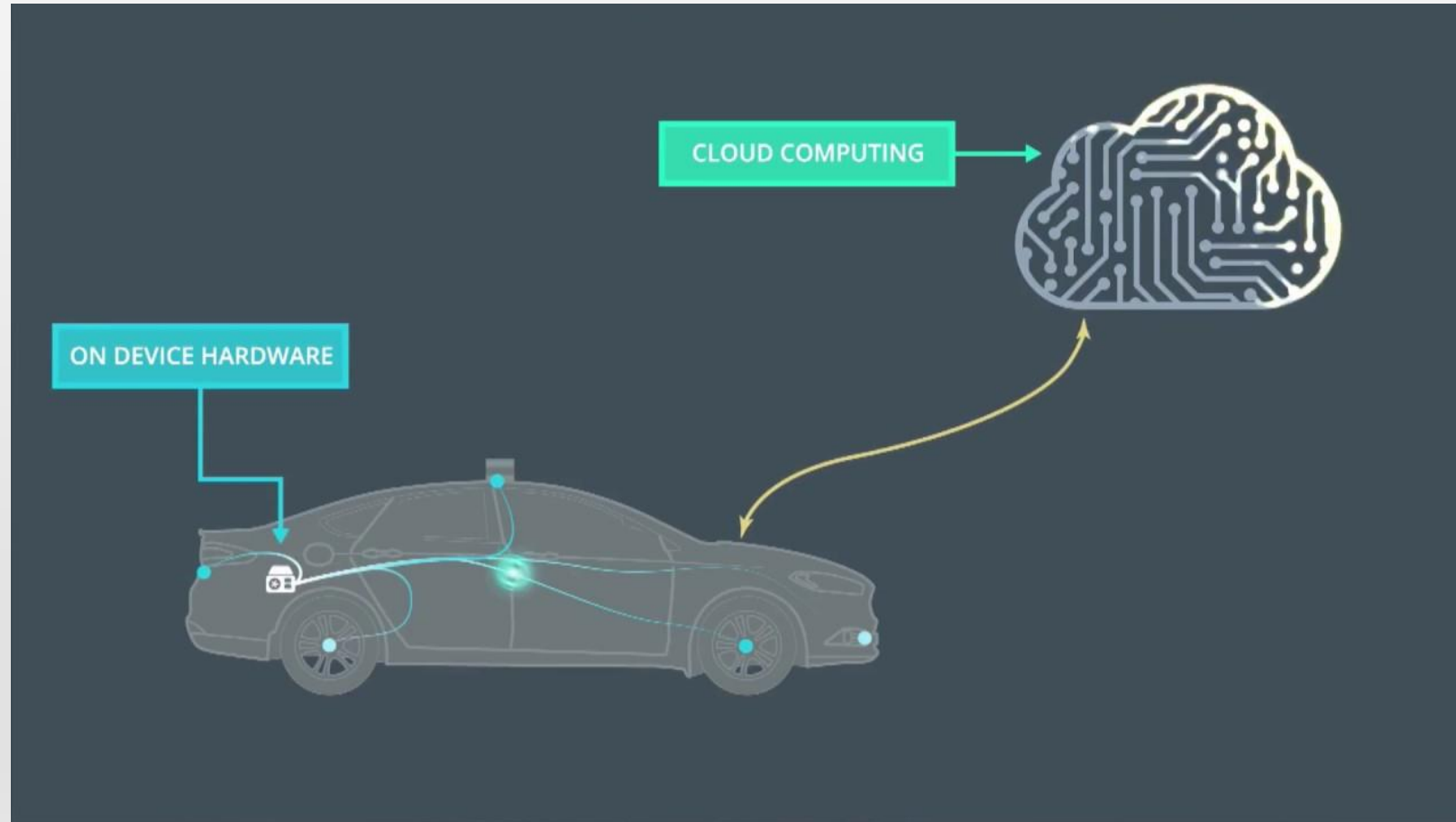
Traffic Prediction

- Traffic conditions such as whether traffic is cleared, slow-moving, or heavily congested
- Real Time location
- Average time has taken
- Google Map

Product Recommendations

- Amazon
- Netflix
- Product as per Customer interest

Self-driving cars



Email Apam and Malware Filtering

- Content Filter
- Header filter
- General blacklists filter
- Rules-based filters
- Permission filters

Multi-Layer Perceptron, Decision tree, and Naïve Bayes classifier are used for email spam filtering and malware detection

Virtual Personal Assistant

Google assistant

Alexa

Cortana

Siri

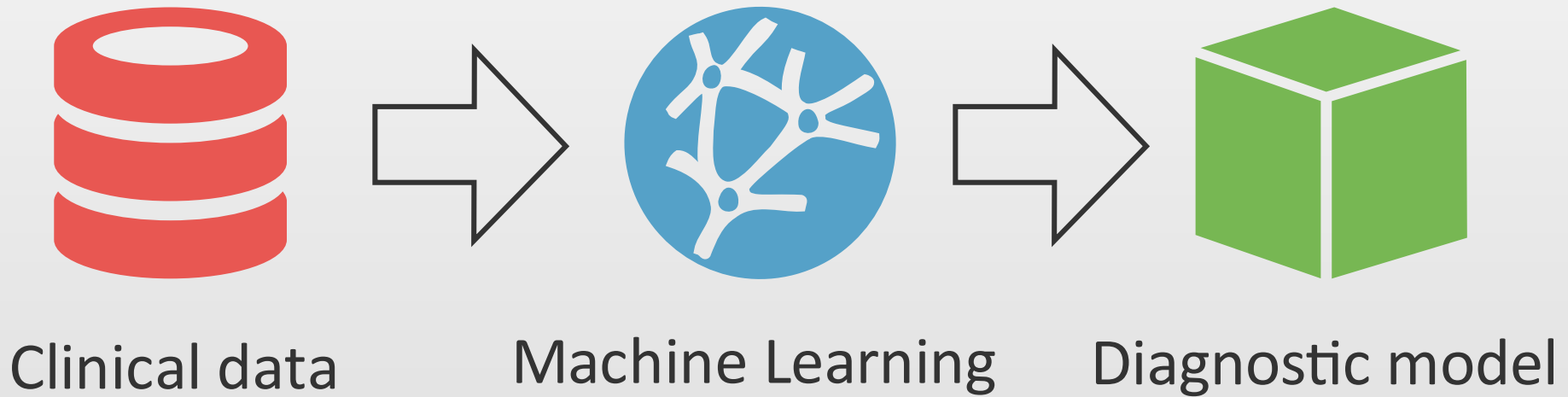
Fake accounts
Fake ids
Steal money
etc.

To detect this, **Feed Forward Neural network** helps us by checking whether it is a genuine transaction or a fraud transaction

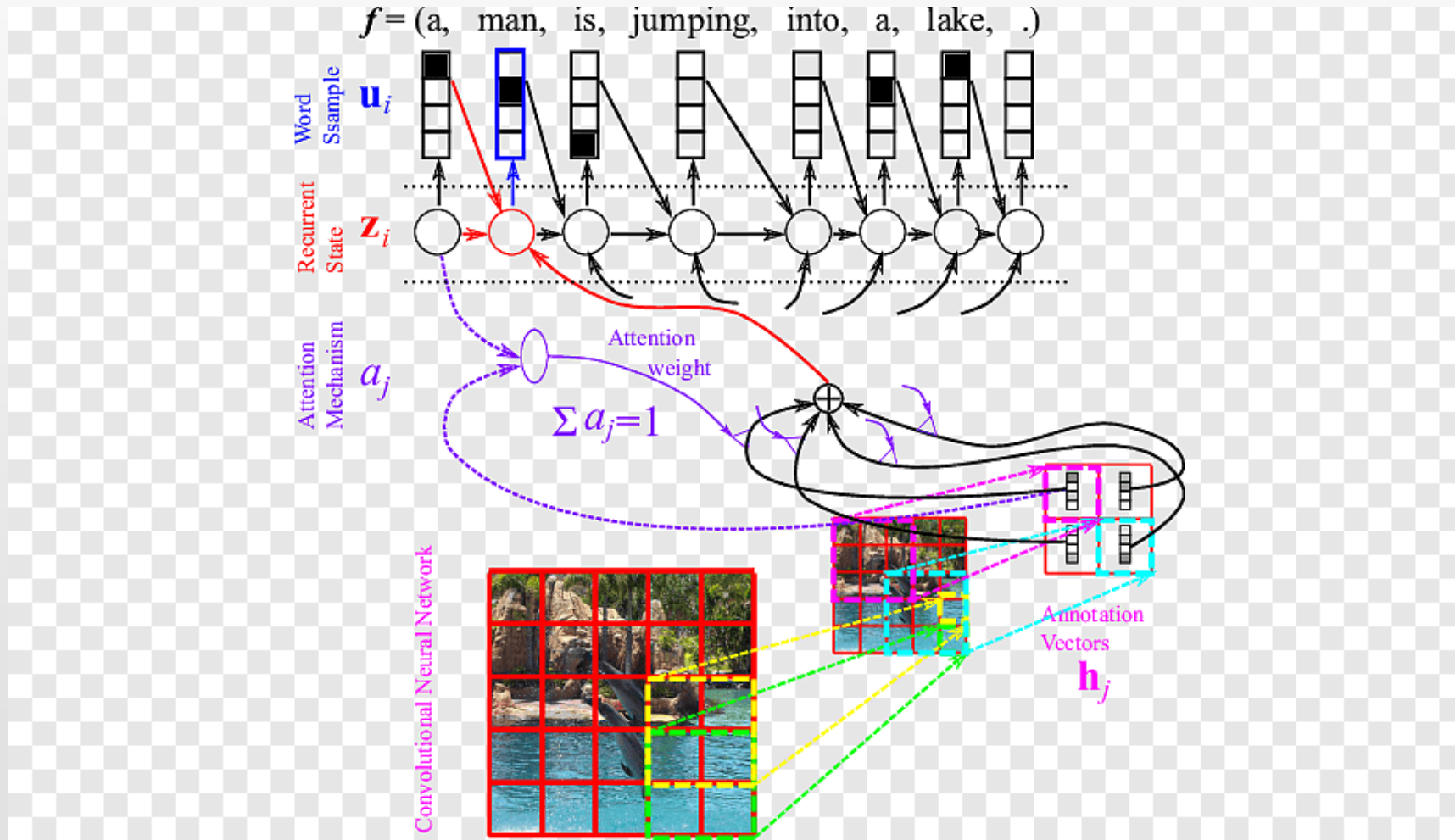
Stock Market Trading

INDP	20,515.74					VOLUB
NYSE	-1,177.37					VOLUC
NYA	9,674.60					TRAN 7
UTIL	683.13	-79.47	SPMi	2,408.00	-276.00	VIX
DXY	98.05	-0.70	SPX	2,423.44	-287.58	RUT 1
TNX	7.28	-2.23	SPH	2,555.50	-128.40	XES
TYH	138.31	2.52	WTI	28.66	-3.07	REIT 1
RLX	1,969.85	-217.43	BRNT	29.71	-4.14	XSD
DRG	539.55	-43.58	GOLD	1,496.90	-19.80	KBE
FTSE	5,151.08	-215.03	FANG	2,667.77	-334.25	GDX

Medical Diagnosis



Automatic Language Translation



Google's GNMT (Google Neural Machine Translation) provide this feature