AI MACHINE LEARNING

We enable machines to **think and work with you.**

Machine Learning (ML) is a subset of Artificial Intelligence or AI that uses a combination of mathematical and statistical algorithms to identify data patterns, enable predictions, or recommend actions. Unlike traditional methods, machine learning algorithms engage in self-directed improvement over time and are able to learn and refine without being explicitly programmed or told to do so.

How Can I Use Machine Learning?

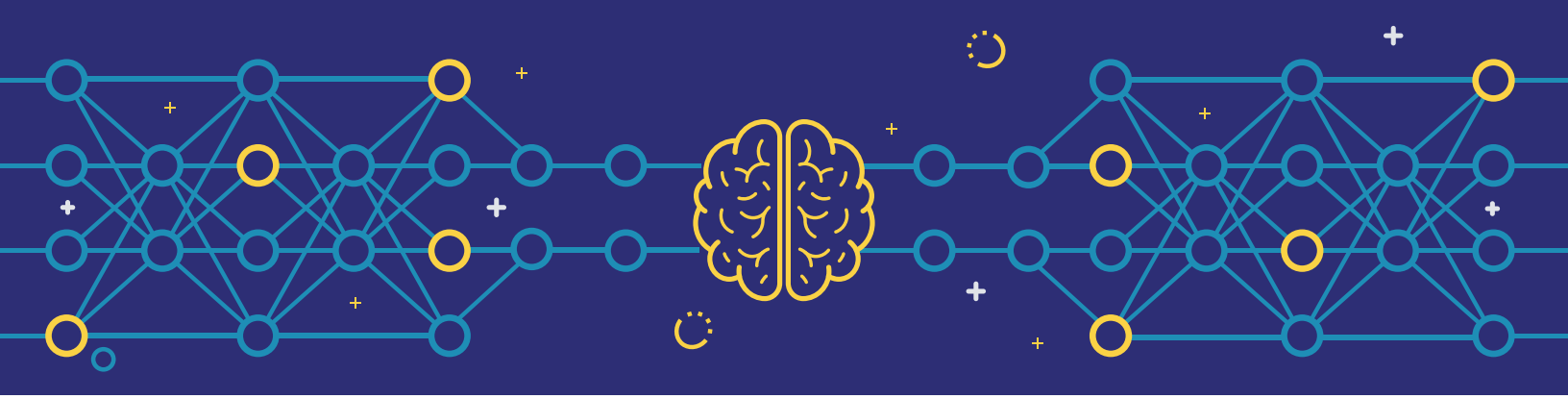
- To identify instances of fraud and likely fraud networks via transaction patterns and relationships.
- Power artificial assistants to provide customers with more nuanced responses than typical chatbots.
- Detect social media patterns to drive optimal marketing placement.
- Predicting propensity to purchase or interact with a brand message.
- Diagnosing and preemptively identifying medical ailments from scans and images.
- Detecting cybersecurity threats at scale.

Machine Learning Relies on Quality Data - and Lots of It

Successful machine learning relies on fast, easy access to reliable information to move your organization forward - unlocking the power of your data – how it is stored, how you access it, how you use it.

These advanced algorithms improve with QUALITY data inputs and need data VOLUME to confirm or refine outcomes. Without quality and quantity, model outcomes are unreliable and can be inaccurate.

From data collection and cleaning, to exploratory data analysis, to modeling and deployment, our team can help you take raw data sources, both structured and unstructured, and transform them into production-ready data pipelines that support advanced ML models.



Silicon Valley Expertise

We bring cutting edge methods to the market that are rarely seen outside of Silicon Valley, including:

- Investment in state of the art research in sequence modeling and natural language processing (NLP).
- Expertise in computer vision, utilizing convolutional neural networks and one of the first groups in the country to implement capsule networks.
- White paper published announcing the discovery of a new type of neural network - Geodesic Network - breaking ground in Artificial Intelligence.
- We have experts with PhDs and Masters from universities such as Johns Hopkins, Oxford, Harvard and the University of Chicago.

Business Impacts – Large Federal Agencies

- Developed an intelligent assistant for online customer service using artificial neural networks in TensorFlow that improved customer response times from 2 hours to less than one minute and reduced overall call volume to high cost call centers.
- Predicted applicant processing times at scale using survival analysis to present highly accurate, personalized customer timelines.

About us

Excella is an Agile technology firm helping Washington, DC's leading organizations realize their future through the power of technology. We work collaboratively to solve our clients' biggest challenges and evolve their thinking to help them prepare for tomorrow. Together we transform bold ideas into elegant technology solutions to create real progress.
Learn more at www.excella.com.

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