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Overview of Machine Language

Machine language refers to the process where computers, through specialized algorithms, learn to recognize patterns in big data of the purpose of analysis, predictions and autonomous decision making. Many industry and political leaders refer to data as digital gold highlighting it importance in the modern business and political landscape. Data refers to a collection of facts and statistics for the purpose of reference and/or analysis. To keep up with fluctuating markets, rapid technological improvements and changing trends, data is essential because it helps stakeholders: make informed decisions based the effects of prior actions, improve user experience by analyzing consumer feedback and monitors levels of productivity by tracking progress over time. To this end, accurate machine learning models are created to make these decisions.

AI and Machine learning are the same technology separated only by their purpose. AI's goal is to create general computers that think and behave as we do through simulated intelligence. Machine learning on the other hand requires preexisting data to learn from and only succeeds and perform a single task extremely well like in the case of pattern recognition. Pattern recognition is the act of creating associations between variables in data. Through it, computer scientists can train machines to recognize new data, sort it, and make appropriate decisions based on the data. Common applications of pattern recognition include weather hazard tracking and object recognition software. Unlike conventional programming, machine learning excels at

allowing developers to create software without full knowledge of its working environment. Without this technology, search engines, malware filtering and virtual assistants among other applications are impossible to create.

To train computers, data is sorted into tables/data frames. An observation/row refers to a single instance of data in a frame. It features several attributes that describe its nature. Quantitative data refers to attribute where the value is a unique numerical quantity. Theoretically, the limits to what value the data can be is infinite so developers usually place limits on it. Qualitative data refers to a set of properties/possible values that an attribute can take on. These properties are necessary to train machine learning models so that useful information can be gathered for decision making.

As someone who enjoys nature, I'm interested in using machine learning to create models to reduce the overall levels of pollution in society while maintaining most people's quality of life. Through logical operations, computer can provide unbiased policies that we can use to live more sustainably.