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### Forecasting Cryptocurrency Volatility

Daniel Wasserman

*Washington University in St. Louis*

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# FORECASTING CRYPTOCURRENCY VOLATILITY

*Daniel Wasserman*

*Mentors: Mina Lee and Li Yang*

The advent of Bitcoin has sparked massive growth in cryptocurrencies in recent years. The prices of Bitcoin and other cryptocurrencies are relatively volatile, which deters people who are risk-averse from investing in them. Many smaller cryptocurrencies are even more volatile than Bitcoin. A model that can predict cryptocurrency volatility based on price motion would benefit potential cryptocurrency investors by providing them with extra information about risk. A random forest machine learning model is used to predict cryptocurrency volatility; this model is compared to the GARCH volatility model that is widely used in modern finance as a benchmark. A discussion regarding model accuracy reveals how predictable cryptocurrency volatility actually is. Finally, comparisons of models with different feature selections give insight as to what factors can significantly influence cryptocurrency volatility.