# Can Artificial Intelligence Predict the Price of Bitcoin in 2030, 2035, and 2040?

NIKOS E. MASTORAKIS

Technical University of Sofia,
English Language Faculty of Engineering,
Clement Ohridski 8, Sofia 1000
BULGARIA
&
Hellenic Naval Academy
Terma Chatzikyriakou, 18539
Piraeus, GREECE

*Abstract: -* This paper surveys the potential role of Artificial Intelligence (AI) in forecasting Bitcoin (BTC) prices for the years 2030, 2035, and 2040. We review recent machine learning approaches, evaluate institutional and expert long-term price projections, and discuss the challenges and uncertainties inherent in long-horizon crypto forecasts. Bitcoin, as the first decentralized cryptocurrency, has evolved from a niche concept to a global digital asset with profound financial implications. This paper presents a multidimensional analysis and forecast of Bitcoin's position in the global financial system in the years 2030, 2035, and 2040. We investigate Bitcoin from the perspectives of monetary economics, adoption dynamics, energy and mining trends, legal frameworks, geopolitical shifts, and technological scalability. A hybrid forecasting methodology is applied, combining stock-to-flow modeling, network growth projections, macroeconomic variables, and regulatory trends. The results suggest a convergence of Bitcoin's role as digital gold, its expansion into sovereign reserves, and the increasing importance of its network security and energy efficiency. Bitcoin (BTC), the first and most dominant cryptocurrency, continues to be a focal point for speculation and institutional interest. This article presents a consolidated forecast of BTC prices through the years 2025, 2030, and 2035, based on the findings of a recent expert panel survey conducted by Finder.com. Predictions range widely due to market volatility, macroeconomic factors, and the evolving regulatory landscape. This study explores projected price trajectories, underlying assumptions, market sentiment, and the feasibility of BTC reaching $1 million.

*Key-Words: -* Artificial Intelligence, Bitcoin Price Forecast, Artificial Intelligence in Finance, Prediction AI-based Bitcoin Models, Institutional Bitcoin Adoption, Stock-to-Flow Model, Bitcoin

Received: March 11, 2025. Revised: May 14, 2025. Accepted: June 12, 2025. Published: August 4, 2025.

## 1 Introduction

Since its inception in 2009, Bitcoin has evolved from a fringe digital currency to a mainstream financial asset. Its value has exhibited significant volatility, sparking both enthusiasm and skepticism among analysts, economists, and technologists. With increasing institutional involvement, questions have emerged regarding Bitcoin's long-term valuation. This article analyzes predictions by 24 experts surveyed by Finder.com [1], offering an academically structured perspective on BTC's price potential through 2035. Bitcoin's extreme volatility and myriad influencing factors—including regulatory policy, macroeconomics, technology adoption, and market sentiment—make long-range forecasting highly uncertain. AI methods such as neural networks, ensemble

models, and hybrid architectures have shown promise in short-term prediction. This article examines whether such methods can credibly project Bitcoin's value toward 2030–2040.

Bitcoin, introduced in 2009 by the pseudonymous Satoshi Nakamoto, has gone through periods of rapid price volatility, technological upgrades, and increasing institutional adoption. As of 2025, Bitcoin is considered both a speculative asset and a store of value. The purpose of this study is to forecast Bitcoin's development over the next 15 years using structured economic, technological, and geopolitical scenarios.

We examine three key future points:

2030: Post all-major developed market integration

2035: Post-fifth halving, with decreasing block rewards

2040: Approaching near-zero block subsidies

## 2 AI-Based Models for Bitcoin Prediction

Recent academic works illustrate evolving AI capabilities:

- Sossi-Rojas et al. (April 2025) propose a machine-learning ensemble combining GRU networks and baseline forecasting, finding that features like Open, High, Low time-series significantly improve directional accuracy compared to using closing price alone
- In a comparative study (May 2024), Mohammadjafari reports that GRU models outperform LSTM in predicting Bitcoin prices, with lower Mean Squared Error (MSE ≈ 4.67 vs. 6.25) on test data
- Guo et al. (2021) describe a hybrid MRC-LSTM model combining multi-scale residual CNNs and LSTM, capturing multi-scale temporal features and external macroeconomic variables, delivering superior short-term forecast performance arXiv.

While these AI models can handle sequential and multivariate data effectively, their ability to meaningfully forecast years or decades ahead remains untested due to limited data length and lack of external scenario modeling.

Expert and Institutional Long-Term Price Projections

Even absent AI, long-term predictions from experts and institutions vary widely:

- According to Finder's panel (July 2025), BTC is projected to reach ≈ $459,000 by 2030, and cross $1 million by 2035
- Economist outlets such as Economic Times cite a forum projecting ≈ $458 647 by 2030, and ≈ $1.02 million by 2035
- Flitpay's projections place Bitcoin in 2030 between $467k–$734.5k, with average $512k; they view $1M+ possible by 2050
- ARK Invest's *Big Ideas 2025* updates present a bear/base/bull 2030 estimate range of roughly $300k / $710k / $1.5M respectively
- CoinCodex forecasts average $1.1M by 2040, rising toward $1.5M by 2050

These projections typically rely on economic assumptions—such as institutional adoption, Bitcoin's store-of-value role, scarcity dynamics, and macro trends—not pure AI modeling.

So, according to the Finder panel, Bitcoin is expected to reach an average price of $145,167 by the end of 2025, a revision upward from previous estimates of $135,048 [1]. The high-end prediction within the panel

is $250,000, supported by analysts who emphasize growing institutional and sovereign adoption.

Morpher CEO Martin Froehler, for instance, projects $250,000, citing adoption by "nation-states, corporations, and institutional investors" as a key driver [1]. Similarly, Joseph Raczynski from JT Consulting foresees BTC reaching $240,000, assuming discreet governmental and corporate accumulation [1].

However, the predictions vary:

- *Upper bound*: $250,000
- *Lower bound*: $70,000
- *Average lower-end*: $87,618

This divergence underscores the speculative nature of cryptocurrency markets.

## 3 Synthesis: AI vs. Expert Forecasts. Challenges and Limitations

AI models work well for week-to-month predictions based on historical sequence data, but do not inherently model macroeconomic regime shifts, regulation, technological change, or adoption curves needed for decade-long forecasting. Expert and institutional forecasts fill that gap, but often contain large uncertainties and diverging assumptions.

Table I summarizes illustrative forecasts:

**Table I: Year AI-based Prediction? Expert/Institutional Average Forecast Range (Low–High)**

| | | | |
|---|---|---|---|
| 2030 | Not directly studied | ≈ $459k–$512k | ~$300k – $734k |
| 2035 | — | ~$1.0M | ~~$1.0M |
| 2040 | — | ~$1.1M | — |

Long term prediction using AI faces several barriers:
A) Data scarcity: Bitcoin’s history (~15 years)

offers few cycles; training AI on multi decade prediction is hampered by limited samples.
B) Non stationarity: Regime changes—regulation, halving events, macro crises—alter dynamics beyond what historical models capture.
C) Feature selection: Many external variables (e.g., regulations, adoption rates) are difficult to encode quantitatively in models.
D) Model overfitting and bias: AI may learn spurious temporal correlations unless carefully regularized.
E) Uncertainty quantification: AI lacks embedded scenario analysis; expert forecasts reflect scenarios, but AI often gives point predictions.

## 4 Bitcoin 2025–2040: Forecasting a Financial Revolution Amid Scarcity, Sovereign Adoption, and Market Volatility

According to the Finder panel, Bitcoin is expected to reach an average price of $145,167 by the end of 2025, marking a revision upward from previous estimates of $135,048. The highest prediction among the panelists stands at $250,000, a figure supported by analysts who emphasize increasing institutional and sovereign adoption. For instance, Morpher CEO Martin Froehler projects Bitcoin at $250,000, attributing this growth to adoption by "nation-states, corporations, and institutional investors." Similarly, Joseph Raczynski of JT Consulting envisions Bitcoin reaching $240,000, assuming quiet accumulation by governments and corporations. However, these forecasts show considerable divergence, reflecting the speculative nature of cryptocurrency markets. The upper bound estimate for 2025 is $250,000, while the lower bound stands at $70,000, with an average of lower-end predictions around $87,618. Looking further ahead, the panel presents even more bullish sentiment. By 2030, Bitcoin is projected to reach $458,647, and by 2035, it could climb to $1,020,000. Josh Fraser, co-founder of Origin Protocol, suggests that Bitcoin could eventually overtake gold as the primary store of value, possibly reaching as high as $1.15 million per coin if global adoption is achieved. These long-term projections are grounded in several assumptions: widespread user adoption, continued scarcity due to Bitcoin's fixed supply of 21 million coins, increasing institutional and governmental investment, and geopolitical instability driving interest in digital assets.

Despite these optimistic forecasts, significant risks remain. Market volatility, regulatory crackdowns, and potential security vulnerabilities could derail Bitcoin's upward trajectory. John Hawkins of the University of Canberra provides a skeptical viewpoint, arguing that Bitcoin lacks intrinsic value and that current valuations are largely inflated by accommodative monetary policies and speculative behavior. The lower-bound estimate of $70,000 for 2025 serves as a reminder of the uncertainty that continues to define the crypto space. In terms of investment strategy, sentiment among surveyed analysts leans positive. About 61% recommend buying Bitcoin, 26% advise holding, and 13% suggest selling. Kadan Stadelmann, CTO of the Komodo Platform, sees current price levels as an attractive entry point, anticipating a peak in early 2026 followed by a natural cyclical decline. Desmond Marshall of Rouge Ventures highlights growing institutional involvement, especially in the United States, and the potential for favorable policy changes under a new U.S. administration as reasons for optimism. In summary, expert forecasts reflect a strong long-term belief in Bitcoin's potential. For 2025, the average prediction is $145,167, with the highest estimate at $250,000. By 2030, the expected price climbs to $458,647, and by 2035, to $1,020,000, with some forecasting as high as $1.15 million. While the general outlook is bullish, the inherently uncertain and volatile nature of the crypto market means that caution remains essential. Bitcoin's fixed supply of 21 million coins makes it unique, and each halving event increases its scarcity. By 2030, approximately 96.8% of all coins will have

been mined. This dynamic underpins the Stock-to-Flow (S2F) model, which, while debated in academic and financial circles, continues to exhibit strong correlation with long-term price appreciation. Persistent global inflation and negative real yields have also driven institutional capital into Bitcoin, as traditional fiat currencies increasingly face debasement. This macroeconomic trend is expected to continue throughout the next decade, exacerbated by aging populations and debt-driven growth models in many developed nations. Institutional and sovereign adoption of Bitcoin is likely to accelerate. What began as the "Bitcoin Treasury" trend—corporations holding BTC on their balance sheets—could evolve by the 2030s into full-fledged sovereign accumulation, particularly in emerging markets suffering from chronic currency instability and inflationary pressures.

By 2030, Bitcoin is forecast to mature further and integrate more deeply into global capital markets. Under a baseline scenario, Bitcoin's price could reach $350,000, while in a high adoption scenario it may climb to $900,000. A low adoption case, however, suggests a more modest valuation of $120,000. Technological advancements, such as the proliferation of the Lightning Network and Layer-2 solutions, will facilitate mainstream payments. Sidechains will increasingly host decentralized finance (DeFi) platforms and smart contracts, while privacy-enhancing technologies like Taproot and its successors will enable optional anonymity for users. The regulatory environment will likely feature clearer legal definitions in G7 countries, with Bitcoin taxed similarly to gold or foreign currency. Central Bank Digital Currencies (CBDCs) will likely coexist with Bitcoin, offering a state-backed contrast in monetary policy. Nonetheless, most developing nations are expected to maintain fragmented or inconsistent regulatory frameworks. Looking ahead to 2035, following Bitcoin's fifth halving, the asset could assume a central economic role as global collateral, functioning similarly to U.S. Treasury bonds in the 20th century. It may be widely used in DeFi, cross-border settlements, and as a systemic risk hedge. The baseline price forecast is $1,000,000, with high adoption potentially pushing it to $2,400,000. A bearish scenario, shaped by poor adoption or macro shocks, might see the price dip to $450,000. Energy usage and mining practices will also evolve by 2035. Global mining is expected to be powered predominantly by renewable energy, and stranded energy monetization projects, especially in Africa and Latin America, will become more common. While ASIC mining centralization remains a concern, decentralization efforts—such as diversified chip production and open-market competition—could curb monopolistic tendencies.

By 2040, Bitcoin will be approaching its terminal supply phase, with block rewards falling below 0.2 BTC per block. At this stage, the network's security budget will increasingly depend on transaction fees. Micropayments and Layer-2 congestion pricing may become the norm, and new Miner Extractable Value (MEV) dynamics will likely emerge. Geopolitically, multiple countries may adopt Bitcoin as part of their sovereign wealth strategies. BRICS nations could integrate Bitcoin rails into alternatives to the SWIFT system. While friction with legacy financial systems is expected, Bitcoin's parallel influence on global monetary policy will likely persist. Price forecasts for 2040 span from a base case of $3,000,000 to an extreme high of $8,000,000, though a collapse scenario—resulting from regulatory overreach or technological failure—could see the price fall to $500,000.

Despite its promise, Bitcoin faces challenges and risks. As block rewards decline, the incentive structure for network security must adapt. The emergence of quantum computing may pose cryptographic threats, necessitating timely migration to post-quantum signature schemes. Additionally, ideological disagreements and protocol forks—driven by issues like scaling, privacy, or regulatory compliance—could fragment the network. Regulatory capture is another major risk. Increasing AML/KYC pressures might push exchanges to operate more like traditional

banks, introducing risks such as address freezing and blacklisting, which would undermine Bitcoin's neutrality and core ethos.When compared to competing assets, Bitcoin maintains a distinct position. It offers high volatility but strong inflation protection, moderate accessibility, and very high resistance to sovereign censorship. In contrast, gold offers low volatility and moderate censorship resistance, CBDCs offer ease of access but no inflation hedge, and real estate is stable but offers limited liquidity and low censorship resistance. Bitcoin's defining feature remains its programmable scarcity and non-sovereign digital permanence. A summary of modeled scenarios reveals the following trajectory: In 2030, a baseline price of $350,000 would reflect its role as a store of value and payment system, with mature regulation in OECD nations but mixed global clarity. By 2035, the price could reach $1,000,000 as Bitcoin becomes a collateral asset and reserve store of value amid global regulatory consensus among G20 members. By 2040, with a projected price of $3,000,000 in the baseline case, Bitcoin may emerge as inter-sovereign money, fully integrated into global trade and wealth structures.

## 7 Conclusion

Looking forward, several promising avenues While AI models demonstrate strong performance in short-term Bitcoin forecasting (daily to monthly horizons), they do not currently provide reliable long-term price predictions into the 2030s and beyond. Expert and institutional forecasts (e.g. Finder panel, ARK Invest) remain the primary source for decade-scale estimates, ranging from roughly $459k – $512k by 2030, and crossing $1 million by 2035–2040 under bullish assumptions.

Future progress might arise from hybrid modeling that combines AI trained on historical time series with scenario-driven macroeconomic simulation and adoption modeling. Until then, long-term forecasts remain highly speculative, and should be interpreted with caution. The path toward a $1 million Bitcoin remains speculative but not implausible. Based on expert forecasts, key drivers include institutional adoption, global macroeconomic instability, and policy shifts favorable to cryptocurrencies. While optimistic scenarios foresee BTC reaching or exceeding $1 million by 2035, such projections depend heavily on market behavior, investor sentiment, and regulatory evolution. Investors and researchers must therefore approach these forecasts with both enthusiasm and caution. Continued monitoring of Bitcoin's integration into traditional finance and its geopolitical implications will be critical.

References

[1] Sossi-Rojas, Velarde & Zieba, "A Machine Learning Approach For Bitcoin Forecasting", *arXiv*, April 2025. ainvest.com+1m.economictimes.com+1softwaretestinghelp.com+10swanbitcoin.com+10InvestingHaven+10arXiv
[2] A. Mohammadjafari, "Comparative Study of Bitcoin Price Prediction", *arXiv*, May 2024. arXiv
[3] Q. Guo et al., "MRC-LSTM: A Hybrid Approach …", *arXiv*, May 2021. arXiv
[4] Finder panel via Coin World/AInvest, "Bitcoin expected to reach $459,000 by 2030, $1 million by 2035", July 8 2025. ainvest.com
[5] Economic Times report, "Long-term Forecast: $458K by 2030, $1.02M by 2035", July 2025. m.economictimes.com
[6] Flitpay, Bitcoin price prediction, projecting $467k–$734k in 2030, $1M+ by 2050. flitpay.com+1InvestingHaven+1
[7] ARK Invest Big Ideas 2025 report, price target for Bitcoin in 2030: $300k / $710k / $1.5M. Ark Invest
[8] Capital.com summary quoting CoinCodex forecasting $1.1M average by 2040. capital.com