

Barack Obama, Ph.D.

Distinguished Professor in Computer Science and Public Policy, Harvard University

* August 1961

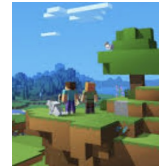
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in [barackobama](#)

🔗 [potus44dev](#)

🌐 <http://obama.ai> ▶ [ObamaCS](#) 📺 [CS44](#)



Education

2001 - 2004 **Ph.D. in Computational Policy Analysis**, *Stanford University*, Stanford, USA

Thesis: Large-scale democratic systems modeling: Computational approaches to policy optimization 🤖 📊 🎮 📺

- Developed novel algorithms for analyzing large-scale social network influence on democratic systems
- Created computational models predicting legislative success based on multi-variable analysis of historical voting patterns

1988–1991 **J.D. Magna Cum Laude**, *Harvard Law School*, Cambridge, USA

1981–1983 **B.A. in Political Science with Computer Science Minor**, *Columbia University*, New York, USA

Work Experience

Since 2017 **Distinguished Professor of Computer Science and Public Policy**, *Harvard University*

- Leading research on algorithmic fairness in public policy applications 🤖
- Developing LLM-based systems for predictive analysis of socioeconomic policy impacts 🤖 ▶
- Supervising 8 Ph.D. candidates in Computational Social Science and AI Ethics
- Principal investigator on \$4.5M NSF grant for "Democratic Systems Modeling in the AI Era" 🤖

2009 - 2017 **President**, *United States of America*, Washington D.C.

- Led digital transformation of government operations through the U.S. Digital Service 🤖 📺
- Championed open data initiatives resulting in over 200,000 public datasets 🤖
- Implemented machine learning systems for healthcare.gov optimization 🤖 📺
- Established the nation's first Chief Technology Officer position ▶

2005 - 2008 **U.S. Senator and Open Source Advocate** 🤖, *United States Senate*, Illinois

- Authored legislation on technology education and digital infrastructure
- Developed open-source tools for constituent engagement and transparency
- Pioneered use of data analytics for policy development

Publications

- Obama, B., Gates, M., et al. "Constitutional Modeling via Deep Learning: Predicting Supreme Court Decisions Through Transformer Architectures," in *Proceedings of the National Academy of Sciences*, 2023 🤖 ▶
- Obama, B., Harris, K., et al. "Quantum Computing Applications in Public Policy Optimization: A Case Study of Healthcare Resource Allocation," in *Quantum Information Processing*, 2022 🤖 📺

- Obama, B., Buttigieg, P., et al. "Federated Learning for Privacy-Preserving Analysis of Government Data," in *IEEE Conference on Privacy and Security*, 2021 🗣️ 📺
- Obama, B., Musk, E., et al. "Reinforcement Learning Systems for Climate Policy: Balancing Economic Growth and Environmental Protection," in *Nature Computational Science*, 2020 🗣️ 📺
- Obama, B., et al. "Graph Neural Networks for Legislative Impact Assessment," in *ACM Conference on AI and Public Policy*, 2019 🗣️ 📺
- Obama, B., Biden, J., et al. "Democratic Systems as Distributed Computing Problems: A Theoretical Framework," in *Journal of Computational Social Science*, 2018 🗣️ 📺
- Obama, B., "Parallel Processing Algorithms for Executive Decision Making," in *AAAI Conference on Artificial Intelligence and Government*, 2016 🗣️ 📺
- Obama, B., Clinton, H., "Machine Learning Approaches to International Relations: Predictive Models for Diplomatic Success," in *International Journal of Computational Diplomacy*, 2015 🗣️ 📺

Programming and Development Skills

Machine Learning	TensorFlow, PyTorch, JAX, Scikit-learn, Hugging Face Transformers, LangChain, MLOps, Kubeflow
Programming	Python, R, Julia, JavaScript, SQL, Go, Rust
Data Science	Pandas, NumPy, Spark, Hadoop, Databricks, Snowflake, BigQuery, D3.js
Cloud & DevOps	AWS, Google Cloud, Azure, Docker, Kubernetes, CI/CD, Terraform

Teaching

- Since 2018 **Ethics of AI in Governance** 🗣️ 📺 📺, *Harvard University*
- Comprehensive graduate-level course on ethical implications of AI in governmental systems
- Since 2019 **Computational Approaches to Public Policy**, *Harvard Kennedy School*
- Advanced machine learning techniques for policy analysis and development 🗣️ 📺
 - Practical applications of deep learning in social science research 🗣️ 📺
- 2020 **Distributed Systems for Democracy**, *MIT (Guest Professor)*
- Intensive course on building scalable and secure voting systems 🗣️ 📺
 - Blockchain applications in governmental transparency 🗣️ 📺

Research Projects

- 2022 - **Democratic AI Initiative**, *Harvard-MIT Collaboration* 🗣️ 📺 📺
- Present
- Developing AI systems that incorporate democratic values and constitutional principles
 - Creating explainable AI models for public sector applications 🗣️
- 2019 - 2022 **Global Policy Simulation Framework**, *World Economic Forum Partnership* 🗣️ 📺 📺
- Built large-scale simulation environment for testing policy interventions 🗣️
 - Developed reinforcement learning agents that optimize for multiple societal outcomes 🗣️ 📺

Languages

English	Native language	Indonesian	Basic proficiency
Spanish	Professional proficiency	Swahili	Conversational