# Abdulhadi Sahin

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Web: https://hadisahin.github.io/

RESEARCH Machine Learning; Deep Learning; Blockchain/Web3; Quantitative Research Interests Methods; International Political Economy; Economic development; Democ-

ratization

EDUCATION Florida International University, Miami, FL, USA

M.S., Computer Engineering, Spring 2023

Washington University in St. Louis, St. Louis, MO, USA

Ph.D., Political Science, Aug 2014

Thesis Topic: The Effect of the IMF forecasts on Investors and Gov-

ernments

Committee: Nathan Jensen (Co-Chair), Andrew Sobel (Co-Chair), Guillermo

Rosas, Matthew Gabel, Dawn Brancati, Gaetano Antinolfi

Washington University in St. Louis, St. Louis, MO, USA

A.M., Political Science, Spring 2012

Texas Tech University, Lubbock, TX, USA

PhD Studies, Political Science, 2006-2008

Bogazici University, Istanbul, Turkey

B.S & M.S., Teaching Physics, Aug 2004

EMPLOYMENT Florida International University, Florida, USA

Graduate Research Assistant at Advanced Wireless and Security Lab

(ADWISE), Jan 2022–present

Sahince Automotive, Bursa, Turkey

Data Analysts, Sep 2018–June 2020

Deputy Production Manager, June 2020-April 2021

TOBB University of Economics and Technology, Ankara, Turkey

Assistant Professor of Political Science, Jan 2015–Aug 2016

Washington University in St. Louis, St. Louis, MO, USA

Graduate Research Assistant, Sep 2008–May 2013

#### **PUBLICATIONS**

- S. Skelaney, H. Sahin, K. Akkaya, and S. Ganapati, "Government Applications and Standards to Use Blockchain", in *Blockchain and its Applications in Industry 4.0*, S. Namasudra and K. Akkaya Eds, Springer Nature, Singapore, 2022
- A. Bhattarai, M. Veksler, H. Sahin, A. Kurt, and K. Akkaya, "Crypto Wallet Artifact Detection on Android Devices using Advanced Machine Learning Techniques," in the Proceedings of EAI International Conference on Digital Forensics & Cyber Crime, Boston, MA, Nov 16-18, 2022
- H. Sahin, K. Akkaya, and S. Ganapati, "Optimal Incentive Mechanism for Fair and Equitable Rewards in PoS blockchains", in the Proceedings of IEEE International Performance Computing and Communications Conference (IPCCC), Austin, TX, Nov 11-13, 2022
- Jensen, Nathan M., Noel P. Johnston, Chia-yi Lee and Hadi Sahin. 2019. "Crisis and Contract Breach: The Domestic and International Determinants of Expropriation". *The Review of International Organizations*.

#### Working Papers

- "LNMesh: Who Said You need Internet to send Bitcoin? Offline Lightning Network Payments using Community Wireless Mesh Networks" submitted to 24<sup>th</sup> IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM),
- "Standardization for Open Administrative Data" Submitted to American Society for Public Administration (ASPA) Annual Conference, 2023
- "Determinants of digital currency and blockchain legislation: An empirical examination of US States" Submitted to Midwest Political Science Association (MPSA) Annual Conference, 2023
- "Using Machine Learning Algorithms in Public Policy and Administration" prepared for submission to Journal of Public Affairs Education
- "Strengthening equality and decentralization in PoS based Blockchains: A Game Theoretic Approach" Submitted to Midwest Political Science Association (MPSA) Annual Conference, 2023
- "Strengthening equality and decentralization in PoS based Blockchains: A Game Theoretic Approach" Submitted to 24<sup>th</sup> Annual International Conference on Digital Government Research (dg.o 2023)
- "Decentralization in Blockchain governance: Comparison of Algorand and Ethereum networks"

# Conference Presentations

- H. Sahin, K. Akkaya, and S. Ganapati, "Optimal Incentive Mechanism for Fair and Equitable Rewards in PoS blockchains", in the Proceedings of IEEE International Performance Computing and Communications Conference (IPCCC), Austin, TX, Nov 11-13, 2022
- "Democracy as Private Property Rights?" Presented at the Midwest Political Science Association Annual Meeting., April 2016, Chicago IL

"The Political Economy of Forecast Bias: International Organizations' versus Private Analysts' Forecasts" poster presentation at American Political Science Association Annual Meeting., August 2014, Washington DC

"How Useful are the IMF Forecasts for Incumbent Governments?" Presented at the American Political Science Association Annual Meeting, August 2013, Chicago IL

Jensen, Nathan M., Noel P. Johnston, Chia-yi Lee and Abdulhadi Sahin. "Crisis and Contract Breach: The Domestic and International Determinants of Expropriation" presented at the Annual Convention of the International Studies Association, April 2013, San Francisco CA.

"The effect of IMF Forecasts on Investors' Behavior" Presented at the Midwest Political Science Association Annual Meeting., April 2012, Chicago

# TEACHING EXPERIENCE

# TOBB University of Economics and Technology

Introduction to Political Economy (Spring 2015 and 2016)

Turkish Political Institutions (Spring 2015 and 2016)

Introduction to Political Science (Winter, 2015)

Quantitative Methods I (Summer, 2015)

Quantitative Methods II (Fall, 2015)

# Washington University in St. Louis

Primary Course Instructor, Spring 2013

Topics in Politics: Middle East Politics

Teaching Assistant, 2009-2013

Israeli Politics and the Arab Spring

International Politics

Environmental and Energy Issues, Introduction to Environmen-

tal Policy

Modern South Asian Politics

Collection and Analysis of Qualitative Data

# Texas Tech University

Teaching Assistant, 2006-2008

American Government

Advanced Quantitative Research Methods in Political Science

#### Computer Skills

Web & App development, Data Analysis & Visualization, Model develop-

ment, Machine Learning

Programming languages: Python, JS, CSS Operating systems: Linux, Windows

Databases: MySQL, SQLite3

Frameworks: React, React-Native, Redux

Statistical tools: R, Stata, MatLab

Data visualization: Dash/Plotly, Microsoft PowerBI

Knowledge in Machine Learning, Artificial Intelligence, and NLP tools

# SOFTWARE PROJECTS

Center for Advanced Research in Forensic Science (CARFS) – Tracing Cryptocurrency Wallets, Sep-Dec 2022

Classifying images in Android devices based on their textual content including handwritten text and QR codes using Deep Learning

Extracting information from the classified images

Searching for crypto wallet related content and creating summary metrics

Lightning (LN) and Mesh Network Simulator, Sep-Dec 2022

Designed a simulator for lightning and Mesh network in Python.

Algorand Protocol Discrete Event Simulator in Python.

Modified the simulator to include full-node wallets and participation rewards May-Aug 2022

Conduct experiments and run simulations on HPC environments, May 2022-present

Mobile app for Workplace Safety and Health inspection, Jan-May 2020 Used JS, CSS and MySOL

A web portal to catalog and manage production defects, Sep-Dec 2019 Used React Native, Redux and MySQL

#### Certificates

Azure AI Fundamentals, Fall 2022

#### References

# Kemal Akkaya

Professor, Electrical and Computer Engineering Florida International University e-mail: kakkaya@fiu.edu

# Nathan M. Jensen

Professor, Department of Government University of Texas-Austin natemjensen@austin.utexas.edu

# Sukumar Ganapati

Associate Professor, Public Policy and Administration Florida International University e-mail: ganapati@fiu.edu