

Alexander Mologoko

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SUMMARY

Award-winning Researcher and Investigator with 26 years of experience across digital assets and traditional finance. Expert in Cryptography, Blockchain Forensics, Tokenization/Real-World Assets (RWA), and Distributed Ledger/DeFi Protocol Security, with specific depth in high-performance trading systems, CEX/DEX and custodial/non-custodial wallet management. Proven record in evaluating the practical feasibility and technical constraints of complex transactions for high-stakes litigation, with specialized knowledge of market conditions and protocol vulnerabilities throughout the history of cryptocurrencies. Trusted advisor to global regulators and law enforcement on market integrity and the mechanics of crypto-related disputes.

WORK EXPERIENCE

Blockchain Innovation Associates / Founder, Principal Consultant

MAY 2018 - PRESENT, New York, NY

A boutique consultancy that enables clients to navigate the emerging crypto landscape by bridging technical innovation with business strategy.

Expert Advice: Advised institutional clients on digital assets strategy, decentralized applications development, algorithmic trading execution across 100+ crypto venues, blockchain data analysis and crypto market structure.

Technical Assessment: Analyzed hardware specifications and delivered a feasibility report on a proposed high-performance Ethereum PoW miner architecture for a potential investor group.

Elementus / Head of Research

NOV 2022 - APR 2026, New York, NY

Research lead at a data-first Web3 intelligence platform, serving institutional clients, government agencies, law enforcement organizations, bankruptcy administrators and law firms.

Strategic Research & Thought Leadership: Create institutional-grade research reports analyzing on-chain activities, market trends, and risk vectors. Produce actionable market intelligence used by hedge funds and venture firms for due diligence on DeFi protocols and digital assets. Regularly publish opinion pieces on Elementus blog to showcase company offerings and promote thought leadership.

High-Profile Forensic Analysis: Senior Blockchain Expert in the Celsius and BlockFi bankruptcy litigations; partnered with attorneys from White & Case and Brown Rudnick, alongside M3 Partners and against Kirkland & Ellis in New York bankruptcy courts. Traced billions in assets on behalf of the Unsecured Creditor Committees. Provided expert testimony and critical material evidence regarding flow of funds, DeFi platform mechanics, and asset recovery.

Innovation in Research Methodology: Pioneered the integration of OpenAI GPT, Google Gemini and xAI Grok LLMs with model fine-tuning, RAG, MCP servers and Agent Skills into the analytics stack, enabling conversational data querying and automated report/dashboard generation combining complex on-chain data, historical market prices and social sentiment analysis.

JST Capital / Head of DeFi

DEC 2021 - NOV 2022, New York, NY

Bootstrapped and led the DeFi business for a global digital asset hedge fund.

DeFi Investment Strategy: Deployed multiple automated delta-hedged yield farming strategies that managed a $40M DeFi portfolio. Consistently generated double-digit APY by dynamically allocating across liquidity pools, reinvesting protocol incentives and mitigating

impermanent loss.

Risk Controls: Built from scratch a proprietary position and risk management platform to monitor exposure across Ethereum, Polygon, Avalanche, and L2s.

Protocol Analysis: Conducted deep-dive research into AMMs and lending protocols (Uniswap, SushiSwap, Aave, Curve, Compound) to inform the firm's asset allocation and treasury strategies.

Cross-functional Collaboration: Collaborated with portfolio managers and other stakeholders to integrate DeFi opportunities into traditional investment frameworks, ensuring alignment with the firm's overall strategy and risk appetite.

Ciphertrace / Head of Digital Assets & Markets Research

MAR 2019 - DEC 2021, Menlo Park, CA

Headed the research department for a premier blockchain analytics firm, focusing on regulatory compliance and market surveillance.

Global Regulatory Engagement: Authored analytical research reports for global regulatory bodies (SEC, FCA, FATF, FinCEN, OSC), providing critical insights on cryptocurrency AML risks, market structure, and compliance best practices. Influenced policy dialogue by delivering data-driven recommendations on digital asset oversight.

Law Enforcement Collaboration: Led joint investigations with international law enforcement agencies (FBI, DEA, Europol, RCMP, RCIPS), applying data science and machine learning techniques to trace illicit cryptocurrency flows and combat money laundering.

Product Development: Designed and developed a cutting-edge market

surveillance platform to detect crypto market manipulation and other abusive trading practices. Expanded product capabilities and client offerings by delivering advanced on-chain risk intelligence.

Investment Research: Helped identify alpha opportunities for alternative investment manager clients leveraging blockchain analytics while bridging the gap between crypto compliance and investment strategy.

Privacy Tech: Led ground-breaking research into privacy coins (Monero, Zcash) sponsored by Department of Homeland Security, inventing patent-pending tracing methodologies.

J.P.Morgan / ED, Credit Electronic & Algo Trading

JUN 2010 - MAY 2018, New York, NY

Designed and developed Automated Market Making platform for Credit and Cash Fixed Income desks during the transition to Dodd-Frank/Volcker Rule regulatory environment and the new market structure. Implemented real-time pricing, ultra-low-latency electronic execution, and high-performance analytics systems, enhancing trading efficiency and ensuring compliance in a rapidly evolving market landscape. Asset classes covered include corporate bonds, CDS, CDIndexes, CDSwaptions, IRS, IRSwaptions, index futures and options.

Credit Suisse / VP Quant Strat, Structured Credit Trading

SEP 2007 - JUN 2010, New York, NY

This role involved working alongside traders to design and develop applications for the Structured Credit and Mortgage Derivatives businesses, which performed valuation, risk and scenario analysis of complex OTC derivatives and swaps/swaptions portfolios.

B2BITS / CTO, Co-founder

FEB 2000 - SEP 2007, New York, NY

Financial Technology (FinTech) Consulting. Specialization included Exchange Connectivity, Order Routing Systems, Order Management Systems, Market Data Systems. Responsibilities included interfacing with clients, gathering requirements, writing specifications (use case, use case realization, functional and technical specs), developing project plans, managing an off-shore development team of up to 30 developers, assisting onsite deployment and user training. Participated in sales, acting as a technical liaison for the sales team. Active participant in the FIX Protocol community: contributing member of Global Fixed Income Committee, Global Derivatives Committee Governance Board, Fixed Income Connectivity Working Group, SDR/FIXML Working Group, High Performance Working Group and Certification Working Group.

EDUCATION

Zicklin School of Business, Baruch College (CUNY) / MBA
New York, NY

Finance Major

National Aviation University / BS & MS
Kyiv, Ukraine

Computer Science Major, Graduated Summa Cum Laude

SKILLS

Cryptocurrencies, Digital Asset Markets, DeFi, Web 3.0, Tokenomics, Cryptography, Data Science, Big Data Analytics, Machine Learning, Artificial Intelligence, Autonomous Agents, Real-time Market Data, High-frequency Trading (HFT), Ultra Low Latency Computing, OMS/EMS, Algorithmic Execution, Automated Market Making (AMM), Quantitative Research, Spreadsheet Financial Modeling, Bitcoin, Ethereum, Solana, EVM L2s (Polygon/Polymarket, BASE, Arbitrum, Hyperliquid), Tron, Avalanche, Ripple, Stellar, Chainlink, Pyth, FIX Protocol, FIX SBE, FIXML, FpML

Python/Jupyter, Rust/Anchor, Modern C++/C, JavaScript/TypeScript/Node.js, Java/Scala, Solidity, Apache Big Data Stack (Kafka, Spark, Flink, Cassandra, Iceberg, Arrow), DuckDB, Arroyo, PostgreSQL, MySQL/MariaDB, GCP/BigQuery/CloudSQL, AWS/RDS, Azure, Cloudflare/R2, Hetzner, Docker, Kubernetes/k3s/Rancher, Nomad

AWARDS

Winner – NYDFS TechSprint 2021: First place in New York Department of Financial Services TechSprint for Virtual Currency innovation https://www.dfs.ny.gov/techsprint

1st Place – Subotnick Center Trading Competition 2019: Achieved top performance in Baruch College's annual trading competition https://www.alumni.baruch.cuny.edu/events/archived-events-fy19/subotnick-center-student-alumni-trading-competition

PUBLICATIONS

"FIX Security Definition and Trade Price Extensions for CDS" EP119

US Patent 17/518,561 - "Tracing Monero Transaction Chains using Non-Deterministic Algorithms based on Random Simulation"