

Sergei Solovev

TradFi – AI / DeFi Transition Expert

Advisor to the President, Mosoblbank (PSB Group) · MSc Candidate in AI, HSE University



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PROFILE

Practitioner with experience in financial markets and banking (portfolio management >\$4B, risk management, treasury, trading infrastructure) transitioning into applied AI research. I operate at the rare intersection of **classical finance (TradFi)**, **AI/ML/DL**, and **decentralized finance (DeFi)**—bridging deep domain knowledge with modern machine learning to transform legacy banking processes and develop security-oriented ML for digital financial systems. This combination of hands-on finance expertise, academic AI training, and DeFi understanding enables a unique perspective on how AI can modernize the financial industry end to end.

AI for Banking **DeFi / Smart Contracts** **Portfolio & Risk Management**
Document AI **ML Pipelines** **Time-Series Forecasting**

RESEARCH INTERESTS

1. AI-Driven Transformation of Classical Banking Processes

Applying ML and deep learning (including computer vision for document understanding) to modernize document-heavy, decision-heavy, and compliance-intensive workflows in banking. This spans intelligent document processing via DL/CV pipelines, decision support for credit and risk, and leakage-safe evaluation protocols aligned with operational timelines. Focus on reliability, traceability, and deployment constraints in regulated environments.

2. ML for Security and Reliability of Digital Financial Systems (DeFi / Smart Contracts)

Learning-based approaches to vulnerability detection and reliability assessment of smart contracts, especially when only low-level artifacts (EVM bytecode) are available and labels may be noisy. Bridging the TradFi risk management mindset with DeFi security.

3. AI × DeFi: Intelligent Systems at the Intersection of Machine Learning and Decentralized Finance

Applying AI/ML/DL to challenges native to decentralized finance: on-chain anomaly detection, protocol risk scoring, automated market maker optimization, and intelligent liquidity management. Conversely, using DeFi as a testbed for deploying autonomous ML agents in adversarial, high-stakes financial environments. This intersection—combining deep TradFi domain knowledge with AI research methods and hands-on DeFi experience—is rare and opens unique research and applied opportunities.

EDUCATION

MSc in Artificial Intelligence

HSE University, Faculty of Computer Science — Moscow, Russia

Thesis: “Multi-Agent AI System for Smart-Contract Security Analysis: Vulnerability Detection and Simulation in Ethereum”

Expected 2027

MSc in AI and Computer Vision (English-taught, grant-funded)

HSE University (Nizhny Novgorod) × Neymark Institute

Expected 2027

MSc in Financial Engineering

WorldQuant University — Washington, DC, USA

Expected 2027

Specialist Degree in Finance and Credit (equiv. MSc)

Kuban State University, Economics Faculty — Krasnodar, Russia

2006

PUBLICATIONS AND PREPRINTS

Solovev, S. (2026). *Machine Learning–Based Vulnerability Detection in Ethereum Smart Contracts via EVM Bytecode Feature Engineering*. Preprint, Figshare.

Solovev, S. (2026). *OCR-Based vs. End-to-End Transformer Pipelines for Receipt Information Extraction: A Comparative Study on SROIE 2019*. Preprint, Figshare.

doi:10.6084/m9.figshare.31430086

SELECTED PROJECTS AND AWARDS

Prize-winner — “Ritmy Prodazh” Hackathon (VK AllCups / VK Education) Feb 2026
Sales forecasting & dynamic pricing on real marketplace data. HSE AI Master’s intensive “ML in Marketplaces.”

Invoice / Receipt Document AI Pipeline 2025–2026
OCR pipeline vs. Donut end-to-end transformer on SROIE 2019; robustness under messenger-grade distortions. [GitHub](#)

Smart-Contract Security ML Pipeline 2025–2026
Engineered features from EVM bytecode; supervised vulnerability detection; reproducible pipeline. [GitHub](#)

PROFESSIONAL EXPERIENCE

Advisor to the President — Mosoblbank (PSB Group), Moscow Feb 2026 – Present

- Lead AI transformation initiatives: roadmap, use-case prioritization, data requirements, pilot launches.
- Supervise Treasury and Financial Markets Operations; coordinate business, IT, and risk stakeholders.

Director, Financial Markets Operations — SMP Bank / Mosoblbank (PSB Group) Mar 2022 – Feb 2026

- Managed securities portfolio >\$4B and daily money-market operations up to RUB 100B across multiple desks (repo, FX, bonds, derivatives).
- Built quantitative screening and valuation tools in Bloomberg BQNT (embedded Jupyter/Python): Eurobond credit-spread screener (1000+ issuers), US equity DCF screener (2000+ companies).
- Member of bank committees; direct reporting to the bank president.

Chief Trader — SMP Bank / Mosoblbank May 2012 – Mar 2022

- Multi-asset trading and portfolio management (bonds, Eurobonds, FX, derivatives); hedging (IRS, repo, swaps).
- Practical experience operating in financial markets under sanctions regime since 2014; built trading infrastructure from scratch.

Head of Market Risk — Globex Bank (VEB Group) Aug 2009 – May 2012

Led risk team (3 analysts); developed VaR models (SMA, EWMA, GARCH, historical simulation), stress testing, limit framework. Credit analysis, regulatory interaction (CBR, auditors, rating agencies).

Earlier Roles: 2006 – 2009

Senior Market Risk Specialist, IFD Kapital (Lukoil Group) — OTC derivatives risk, collateral management, Basel II implementation (CySEC).

IR Specialist, South Telecom (Rostelecom Group) — investor relations, press releases, rating agency communications.

DEFI AND BLOCKCHAIN EXPERTISE

Full cycle from digital asset generation (mining) through cryptocurrency wrapping to DeFi liquidity management (Uniswap, Aave, Curve, staking, liquidity aggregation). Smart-contract architecture, tokenomics, and security analysis (Solidity — logic-level understanding). Academic research track: ML-based vulnerability detection in Ethereum smart contracts (HSE thesis).

Regulatory knowledge: Russian digital financial assets framework (Federal Laws 259-FZ, 34-FZ; CBR experimental legal regimes).

TECHNICAL SKILLS

Programming: Python, Jupyter, C++, Git, SQL, Bloomberg BQNT, Solidity

ML / DS / DL: Feature engineering, regression/classification, validation & error analysis, gradient boosting, time-series, deep learning for NLP/CV, document understanding (OCR, layout-aware transformers)

DeFi / Blockchain: Smart-contract architecture, tokenomics, protocol risk analysis, on-chain analytics, liquidity management (Uniswap, Aave, Curve, staking)

Finance: Bloomberg Terminal, risk models (VaR, stress testing), derivatives pricing, credit analysis (RAS/IFRS)

Languages: English (fluent), Russian (native), German (basic)

SELECTED SPEAKING AND LEADERSHIP

- **Moderator** — Panel 4 “Artificial Intelligence (AI) for Trading,” ACI Russia eFX & Digital Summit 2025 (Moscow, Dec 2, 2025). Panel included a Bank of Russia representative and senior leaders from major financial institutions; topics: LLM limits, AI methodologies in banks, automated trading strategies, and AI regulation. acirusia.org/efxsummit
- Act as a practical bridge between regulators and market practitioners on AI adoption: translating AI/ML ideas into operational use cases and measurable outcomes in real financial-market workflows.

SERVICE AND AFFILIATIONS

- **Board member**, ACI Russia (International Association of Currency and Money Market Traders).
- Regular speaker at professional conferences (ACI Russia, Atlanty Business Club, Private Money Forum, T-Zh).
- Additional certifications: Sber University DeFi 1.0 & 2.0 (2024–25); Yale Financial Markets (R. Shiller, Coursera); NAUFOR FSFR Series 1.0 & 5.0 professional qualifications; professional appraiser diploma.