

Mikhail Mitkevich

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EDUCATION

PHD MECHANICAL ENG.

MOSCOW INSTITUTE OF PHYSICS
AND TECHNOLOGY (MIPT)
2006 | Moscow, Russia

MSC APPLIED MATHS

MOSCOW INSTITUTE OF PHYSICS
AND TECHNOLOGY (MIPT)
2002 | Moscow, Russia
Cum. GPA: 4.8 / 5.0

LINKS

Github:// [mmitkevich](#)
LinkedIn:// [mmitkevich](#)

SKILLS

MATH

Linear algebra
Statistics
Random processes

COMPUTER SCIENCE

Algorithms
Machine learning
Functional & reactive programming
Distributed systems
Lock-free & multithreading
Unix tools and scripting

DATABASES

Recent use:
Oracle, PostgreSQL
MongoDB, LMDB
Familiar:
Redis, LevelDB, MySQL

PROGRAMMING

Over 5000 lines:
C++ • Python • C#.NET
Matlab • Assembly • Shell
Over 1000 lines:
Javascript • CSS
R • \LaTeX
Android • PL-SQL
Familiar:
Rust • Typescript
F# • Nim

TEAMWORK

Git • Mercurial • Svn
GitLab • Jira

EXPERIENCE

CONTRACT WORK | QUANTITATIVE RESEARCHER

2013 - Present | Moscow, Russia

- Research statistical arbitrage possibilities in U.S. equities.
- Apply PCA dimension reductions & k-means clustering methods to find robust mean reversion portfolios.
- Perform historical simulations of long-short equity trading strategies in high frequency environment.
- In-house tick storage & historical backtesting software development
- Open sourced: **NArctic** - port of arctic tick storage database for .net

Tools

Python, cython, numpy, pandas, sklearn, matplotlib, mongodb, lmdb, c#.net

STOCKSHARP.COM | SOFTWARE DEVELOPER

2011 - 2013 | Moscow, Russia

- Designed and implemented realistic high-frequency algorithms backtesting engine as part of **StockSharp** project.
- Implemented proprietary Level 2 order book database.

Tools

C#.NET, C++, FIX 4.4

PROP. HEDGE FUND | QUANTITATIVE RESEARCHER

2006 - 2008 | Moscow, Russia

- Worked on volatility trading strategies for U.S. markets.
- Utilized evolutionary algorithms for U.S. equities portfolio optimization in walk-forward environment.
- Optimized stock options backtesting system performance.

Tools

C#.NET, C++

ALCATEL-LUCENT | SOFTWARE ENGINEER

2008 - 2015 | Moscow, Russia

- Developed distributed server architecture for large-scale Interactive Voice Response (IVR) services.
- Fine-tuned Automatic Speech Recognition algorithms.

Tools

Genesys Framework, Genesys SDK, Java, Tomcat, Oracle

RESEARCH

MIPT | RESEARCHER

2006-2015 | Moscow, Russia

- **softwatch** - Intelligent personal time tracking.
- Monte-carlo tree search and opponent modeling in games AI.
- Automatic language detection using Markov chains.

INSTITUTE OF SYSTEM PROGRAMMING | RESEARCHER

2002-2006 | Moscow, Russia

- **gcc** compiler and gdb debugger porting for custom ARM-like CPU.
- ARM simulator & gcc compiler porting.
- Parallel http scraping framework development in python.

Tools

C++, Python, gevent