

ISMAIL NEGM

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INNOVATIVE SOFTWARE ARCHITECT

Software Architect • Software Engineer • Quantitative Developer • Software Developer
Quantitative Finance • Machine Learning • Distributed Architecture • Application Development
Wrote High-Performance Applications • Designed Trading Infrastructure • Automated Processes

WORK EXPERIENCE

Quantitative Analyst and Developer

May 2018 - present

- Contracted to work on a variety of projects designing and developing machine learning systems.
- Developed risk management and quantitative trading strategies for clients.
- Designed a complete exchange infrastructure which accommodates call, continuous order-driven, and mid-price auctions as well as complex order types.

e180

Jan 2017 - April 2021

Director of Research and Development

- Proposed research projects aligned with company objectives to CEO & CTO.
- Identified, applied for, and secured enough grants to generate profits.
- Developed deep learning projects from concept to product.
- Achieved <100ms recommendations on loads of 5K simultaneous users by developing an online-learning model used for peer-to-peer learning at conferences and events.
- Yielded 90%+ recommendation accuracy on initial datasets of < 100 entries.
- Achieved 100% approval on SR&DE audit.
- Earned praise from the Canadian Scientific and Experimental Development agency for work "highly innovative and resolving important technical uncertainties in all of its aspects"

Crystalline Asset Management

Mar 2013 - Dec 2016 (contract 2018-2020)

Quantitative Analyst and Developer

- Designed and developed risk management strategies for each fund.
- Architected suite of trading infrastructure used to place and follow orders.
- Saved over \$100K in annual software license fees by developing tools.
- Developed pricing and risk applications across 4 asset classes and 4 investment strategies.
- Reduced end-of-day reconciliation processes from hours to minutes.
- Improved pricing model run times from hours to seconds.

Majestic Asset Management

Mar 2012 - Feb 2013

Vice-president, Head of Research

- Optimized 200+ open positions and enabled real-time portfolio analysis by designing market risk management systems and the fund's research infrastructure.
- Made it possible to maintain an investment universe of thousands of contracts on dozens of international exchanges by developing tools to conduct fast incremental risk evaluations.

Risk Analytics

Oct 2009 - Feb 2011

Managing Director, Co-Founder

- Offered bespoke market-risk management services (consulting, design, and development) to investment funds and brokerages in the MENA region.
- Designed and oversaw development of all products by a staff of 30 full-time and contract staff.
- Raised \$1.5M in non-venture capital funding.
- Developed market risk applications for dozens of clients with several billion dollars in AUM across 3 countries.

Tiamat Trading

Feb 2008 - Apr 2009

Managing Director, Co-Founder

- Delivered time-series simulation environments for derivatives pricing, back-testing, optimization.
- Designed and developed a commercial implementation of Benoit Mandelbrot's Multifractal Model of Asset Returns.

Prior Experience: *HSBC Securities, Options Trader; Computershare Trust, Investment Services Representative*

EDUCATION

Canadian Securities Institute, Toronto, ON

2008

Derivatives Market Specialist

Memorial University of Newfoundland, St. John's, NL

2004

Undergraduate studies in Mathematics and Behavioral Neuroscience

TECHNOLOGIES, LANGUAGES

Languages: Python, C, JavaScript, PL/pgSQL, SuperCollider, VBA, R, Verilog, Q

Libraries: pandas, numpy, scipy, scikit-learn, xgboost, tensorflow, nltk, pika, flask, fastapi, blpapi (Bloomberg), openpyxl, XlsxWriter, tornado, flask, shiny, JQuery, AngularJS

Dev-Ops: RabbitMQ, Docker, Kubernetes, Terraform

Databases: TimescaleDB, Postgres, MongoDB, HDF5, MSSQL, MySQL, Kdb+

Languages: French, English, Arabic

OTHER INTERESTS

Teaching: quantitative finance (HEC Montreal, IIMA Cairo), programming (EasternBloc, Oboro), electronics and musical performance (Mutek, MoogAudio, EasternBloc, Oboro)

Electronics: design and assembly of modular synthesizers

Trimix SCUBA: certified technical dive master (dives on trimix to depths of 100m / 330ft)

War photography: covered the Egyptian revolution (CNN) and the Libyan civil war (LNP)

Experimental synthesis: several dozen musical performances and workshops given