Thomas Dudzik

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EDUCATION

Massachusetts Institute of Technology (MIT)

M.Eng. in Computer Science – 5.0/5.0 GPA   *Class of 2020*
  – Completed thesis with the MIT Biomimetic Robotics Lab

S.B. in Computer Science, Mathematics (double major) – 4.9/5.0 GPA   *Class of 2019*
  – Honor Societies: Eta Kappa Nu, Tau Beta Pi

EXPERIENCE

Quant Dev at HFT Firm (New York)   *Mar 2021 - present*

– Quantitative research and development for crypto spot and derivatives high-frequency trading across all major CeFi and DeFi exchanges.
– Performed signal research and implementation, param tuning, research library and tooling development, exchange integrations, trade monitoring and operations, and infrastructure deployment.
– Re-architected latency-critical microservices from Python to Rust, reducing tick-to-trade latency down from double-digit millis to sub-millisecond.
– Managed cluster of cloud machines for data warehousing, model fitting, running strategies, and custom market visualization.

Quant Dev at Vatic Investments (New York)   *Sep 2020 - Jan 2021*

– Contributed to in-house quantitative research library and developed market data tools for processing live and historical data with a focus on post-trade analysis.

Software Eng Intern at Zoox (San Francisco)   *Summer 2019*

– Developed and patented a novel computer vision approach for classifying and understanding dynamic environments for monocular depth estimation aboard autonomous vehicles using a semi-supervised convolutional neural network.

Markets Analyst Intern at J.P. Morgan (New York)   *Summer 2018*
– Improved the bank's price discovery algorithm for G10 FX forwards via statistical lead/lag analysis of broker time-series data.
– Developed a chatbot to identify broker quotes indicating live price updates using NLP and machine learning techniques.

PUBLICATIONS

Dudzik, Thomas et al. (2020). "Robust Autonomous Navigation of a Small-Scale Quadruped Robot in Real-World Environments". In: *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, pp. 3664–3671. DOI: 10.1109/iros45743.2020.9340701.

SKILLS

Languages:	Python, Rust, C++, C, Solidity, Typescript
Tools:	AWS, Linux, Git, Grafana, Pandas, Protobuf, ZMQ
Subjects:	algorithmic trading, high-throughput and low-latency software, distributed systems, probability and statistics, machine learning, web3, DeFi, MEV