tomdudzik.com

THOMAS DUDZIK

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EDUCATION

Massachusetts Institute of Technology (MIT) Cambridge, MA
M.Eng in Electrical Engineering & Computer Science – 5.0/5.0 GPA *Class of 2020*
S.B. in Computer Science & Engineering and in Mathematics (double major) – 4.9/5.0 GPA *Class of 2019*
Honor Societies: Eta Kappa Nu, Tau Beta Pi
Relevant Coursework: • Advanced Algorithms • Linear Algebra • Machine Learning • Computer Vision • OS Engineering • Probability • Theoretical Statistics • Stochastic Processes • Bayesian Inference • Information Theory

EXPERIENCE

Crypto HFT Firm Remote
Engineer (Partner) *Current*
Quantitative research and development for crypto spot & derivatives trading across all major CeFi and DeFi exchanges.

Vatic Labs New York, NY
Quantitative Developer *Sep. 2020 – Jan. 2021*
Performed statistical analysis and high-performance software engineering for high-frequency trading.

Zoox Foster City, CA
Software Engineering Intern – Perception Team *Summer 2019*
Developed and patented a novel computer vision approach for classifying and understanding dynamic environments.
Implemented a semi-supervised convolutional network for monocular depth estimation aboard autonomous vehicles.

J.P. Morgan New York, NY
Markets Analyst Intern – FX E-Trading *Summer 2018*
Improved 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.

Blockstream Mountain View, CA
Software Engineering Intern – Core Infrastructure Team *Summer 2017*
Developed an entirely new blockchain format focused on scalability, user privacy, and fungibility.
Implemented the protocol as an open-source Bitcoin sidechain, decreasing disk and network usage by tens of gigabytes.

Philips Cambridge, MA
Software Engineering Intern – Acute Care Solutions (ACS) Team *Summer 2016*
Prototyped various reinforcement and deep learning algorithms for use in behavior change applications/healthcare.
Researched machine learning methods to better adapt to individuals for improved efficacy and user engagement.

RESEARCH

MIT Biomimetic Robotics Lab Cambridge, MA
Graduate Researcher – Sangbae Kim's Lab *Fall 2019 – Spring 2020*
Developed a vision-based mapping and planning framework for the MIT Mini-Cheetah robotic platform.
Published a paper to IROS2020 as first author titled "Robust Autonomous Navigation of a Small-Scale Quadruped Robot in Real-World Environments."

NASA Biologic Analog Science Associated with Lava Terrains (BASALT) Cambridge, MA
Undergraduate Researcher – MIT Man Vehicle Lab *Spring 2016*
Optimized features for the SEXTANT API to allow for planning of efficient extravehicular traverses.
Integrated resource-based path-optimization into the widely-utilized xGDS software using Python.

SKILLS & INTERESTS

Python • Rust • TypeScript • C/C++ • Machine Learning • HFT • Web3/Solidity/MEV

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English • Polish • Spanish • Rubik's Cubes • Cycling • Alto Saxophone • MIT Bitcoin Club