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THOMAS DUDZIK

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EDUCATION

Massachusetts Institute of Technology (MIT)

Cambridge, MA

Candidate for 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 • Cryptography • Bayesian Inference • Information Theory

EXPERIENCE

Zoox

San Francisco, CA

Software Engineering Intern – Perception Team

Summer 2019

Researching and developing novel computer vision approaches for classifying and understanding dynamic environments.
Implementing a semi-supervised convolutional network for monocular depth estimation on board autonomous vehicles.

J.P. Morgan

New York, NY

Markets Analyst – 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) Department

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

Toyota-CSAIL Joint Research Center

Cambridge, MA

Undergraduate Researcher – Rus Lab

Fall 2017 – Spring 2018

Created a novel verification system to evaluate autonomous driving capabilities of deep neural network architectures.
Implemented viewpoint transformation of camera frames to adjust car sensor inputs according to calculated error.

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.

LEADERSHIP, ACTIVITIES, & PROJECTS

Graduate Teaching Assistant (TA)

Fall 2019

Advances in Computer Vision

Designed problem sets, ran office hours, and handled logistics for MIT's graduate computer vision course.

NodeUI

Nov. 2015

HackHarvard Hackathon Group Project

Created an intuitive, gesture-based UI using a Leap Motion that won first place in the Pure CS category out of 500 entries.

SKILLS & INTERESTS

Python • C/C++ • Java/JS • MATLAB • Git • TensorFlow/Keras • OpenCV • Blockchain

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