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THOMAS DUDZIK

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EDUCATION

Massachusetts Institute of Technology   Cambridge, MA
Candidate for S.B. in Electrical Engineering & Computer Science – 4.9/5.0 GPA   *Class of 2019*
  Honor Societies: Eta Kappa Nu, Tau Beta Pi
  Relevant Coursework: • Algorithms I • Discrete Math • Computation Structures • Machine Learning • Computer Vision
                • Software Construction • Systems Engineering • Probabilistic Systems Analysis

Westminster School   Simsbury, CT
Valedictorian - 97.0/100.0 (unweighted), SAT: 2340 – M: 800, CR: 740, W: 800   *Class of 2015*
  Awards: CollegeBoard National AP Scholar, Yale Book Award

EXPERIENCE

MIT Toyota-CSAIL Joint Research Center   Cambridge, MA
Undergraduate Researcher – Rus Lab   *Fall 2017 - Present*
  Creating a novel verification system to evaluate autonomous driving capabilities of deep neural network architectures.
  Implementing viewpoint transformation of camera frames to adjust car sensor inputs according to calculated error.

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.
  Improved a large-scale decentralized cryptographic system that handles over 300,000 transactions per day.

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.
  Developed flexible Python framework for simple algorithm implementation, benchmarking, and evaluation.

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

NodeUI   *Nov. 2015*
HackHarvard Hackathon Group Project
  Created an intuitive, gesture-based UI focused on ease of use through integration of a Leap Motion sensor.
  First place winner in the Pure CS category at HackHarvard 2015 out of over 500 competitors.

Cycling   *2011 - Present*
Member of MIT Men's Cycling Team
  Racer on the MIT Men's Cycling Team, previous captain of the Garmin-Sharp National Development Team.
  Earned bronze at US National Championships, competed internationally in Belgium, Poland, Bahamas, Canada.

Varsity Men's Swimming   *2012 - 2015*
Captain of the Westminster School Men's Swim Team
  Led four-man freestyle relay team to a successful 1st place finish at the 2014 NEPSAC DII Championships.
  Member of the 200 yd. medley relay team that broke the school record during 2014 season.

SKILLS & INTERESTS

Python • C/C++ • Java • Git • HTML/CSS • MATLAB • Theano/TensorFlow • Blockchain

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