# Eric Wadkins

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## Education                                                                    (http://ericwadkins.com/#about)

**Massachusetts Institute of Technology (MIT)** – GPA: 4.6 (Major: 4.7)                    **Cambridge, MA**
Candidate for Bachelor of Science in Computer Science and Engineering                          June 2018

## Skills                                                                       (http://ericwadkins.com/#skills)

**Programming:** Java, C++, JavaScript, Node.js, Python, HTML, CSS, XML, R, MATLAB, Arduino, Android, GLSL, LaTeX
**Libraries/Other:** OpenCV, OpenGL, TensorFlow, PyTorch, Keras, MongoDB, ANTLR, UNIX, NumPy, SciPy, scikit-learn, jQuery, Durandal, Bootstrap, Express, Linux, Git
- Designing, implementing, and testing general applications, web applications, and libraries.
- Researching, designing, and experimenting with AI systems, including neural network models.

## Experience                                                                   (http://ericwadkins.com/#timeline)

**Quantum Photonics Laboratory, Research Laboratory of Electronics (RLE)**          **Cambridge, MA**
*MITRE Undergraduate Research and Innovation Scholar (3 semesters)*               Feb. 2017 - Present
I'm currently leading a year-long research project sponsored by MITRE that is aimed at improving instrument localization and autonomous navigation using Bayesian inference. My previous work for the Quantum Photonics Laboratory includes developing machine learning and computer vision-enabled algorithms to automate processes in the lab, such as detection and examination of auxiliary information near nitrogen-vacancy centers in diamond.

**National Aeronautics and Space Administration (NASA)**                              **Greenbelt, MD**
*Machine Learning Intern @ Goddard Space Flight Center*                             Jan. – Feb. 2018
I interned with NASA at the Goddard Space Flight Center, where I used machine learning to apply satellite measurements to applications of aerosol science. My project focused on using data from the MODIS Terra and Aqua satellites and GEOS-5 forecasting model to create a neural network model for the prediction of cloud effective radius.

**Google**                                                                          **Los Angeles, CA**
*Software Engineering Intern*                                                       Jun. – Aug. 2017
As an intern at Google's Venice, CA office, my work included the design, implementation, testing, and concurrent optimization of an intelligent automated tool for YouTube's internal infrastructure.

**Computer Science and Artificial Intelligence Laboratory (CSAIL)**                 **Cambridge, MA**
*Undergraduate Researcher*                                                          Sept. - Dec. 2016
The InfoLab Group conducts research on AI, computer vision, natural language processing, and multimedia information access. My research included a system to determine homographic scenes based on physical properties of objects, and the ability to query these scenes using natural language.

**Diameter Health**                                                                  **Newton, MA**
*Software Engineering Intern (2+ years – summers, winters, part-time semester work)*   Jun. 2015 – Feb. 2017
At Diameter Health, I designed and developed full-stack applications using proprietary algorithms to analyze and reveal insights in healthcare data. I was heavily involved in the design, implementation, and testing of software, as well as the tailoring of applications to individual clients. Some prominent projects include an advanced free-text medication signature parser using natural language processing techniques and an automated predictive tool, funded by the NIH, to examine a clinician's ability to assess the risk of Chronic Kidney Disease.

## Projects/Papers                                                              (http://ericwadkins.com/#projects)

**Computer Vision Tools for Location Nitrogen-Vacancy Centers**
Authored by Eric Wadkins, Michael Walsh, Dirk Englund – Short link: http://ericwadkins.com/p/1
**Request,** *Java Library* – Used for sending HTTP/HTTPS requests with data management functions
**OpenGL Game Engine,** *C++/OpenGL* – A custom OpenGL game engine created in C++.
**Ray Casting Simulation,** *C++/OpenCV* – Ray casting, spatial mapping, Bayesian filtering, and pathfinding simulation.
**Compiler,** *Java Project* – A compiler/transpiler for my own C-based scripting language.

***To learn more about me and my other projects/papers, visit*:** http://ericwadkins.com