Eric Wadkins

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Education

Massachusetts Institute of Technology (MIT) — **Cambridge, MA**
Candidate for Bachelor of Science in Computer Science and Engineering — June 2018
Current GPA: 4.4

Skills

Programming: Java, C++, JavaScript, HTML, CSS, Python, Node.js, Android, Linux, MATLAB, GLSL
Libraries/Architectures: OpenCV, OpenGL, ANTLR, NumPy, jQuery, Durandal, Bootstrap, jqPlot, Kendo UI, REST, SOAP, XML, Express, Apache Tomcat
Databases: MongoDB
Collaboration/Other: Git, Gradle, Eclipse, Trello
Experience designing, implementing, testing, and maintaining general applications, web applications, and libraries, as well as conducting the research required to do so.

Experience

InfoLab, Computer Science and Artificial Intelligence Laboratory (CSAIL) — **Cambridge**
Undergraduate Researcher — Sept. 2016 - Present
The InfoLab Group conducts research on AI, natural language processing and multimedia information access, with the goal of bridging the gap between human and machine learning via computer-human interaction, as well as computer vision and machine learning methods. My research includes a system to determine homographic scenes based on physical properties of the objects in the scenes, as well as the ability to query the system about a certain scene in natural language.

Diameter Health — **Newton, MA**
Software Engineering Intern — June 2015 - Present
As an intern at Diameter Health for two years, I designed and developed full-stack applications and worked with proprietary algorithms that analyze data to reveal insights useful for healthcare organizations and clinicians. I've been heavily involved in the design, implementation, and testing of software, as well as tailoring applications to the needs of individual clients.

- Designed, implemented, and tested an advanced free-text medication sig parser which uses natural language processing techniques such as tokenization and POS tagging.
- Developed a full-stack application for Partners Healthcare as part of a research study, funded by the National Institutes of Health, to determine whether automated predictive tools improve a clinician's ability to assess the risk of Chronic Kidney Disease in patients with early kidney disease.
- Worked as part of a team developing an application to analyze the quality of Continuity of Care Documents (CCDs) to improve documentation for healthcare organizations.
- Created a full-stack Return on Investment (ROI) tool for the Sales and Marketing division in order to increase sales and allow for the visualization of potential return on investment.
- Created scripts in Node.js to interface with database systems and automate the use of Diameter Health's other services for clients.

Projects

Request, *Java Library*
A library used for sending HTTP and HTTPS requests with many data management functions designed to make sending requests and parsing the response as simple as possible.

OpenGL Game Engine, *C++/OpenGL Project*
A custom game engine created in C++ using OpenGL. This includes support for dynamic lighting, fractal algorithms to generate terrain, and an object rendering system for static and dynamic objects.

Ray Casting Simulation, *C++/OpenCV Project*
An AI using ray casting, spatial mapping, Bayesian filtering, and pathfinding to perform tasks such as estimating its location on a map and navigating towards a goal through an unknown maze in real time.

To learn more about me and some of my other projects, visit: http://www.ericwadkins.com

Activities

HackMIT, MIT Battlecode Competition, MIT First Generation Program