

# BRANDON CARTER

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## Education

- Massachusetts Institute of Technology (Cambridge, MA)** June 2017  
**Candidate for B.S. in Computer Science and B.S. in Mathematics** GPA: 4.7/5.0  
Select Coursework: Machine Learning and Neural Networks, Theory of Computation, Advanced Natural Language Processing, Performance Software Engineering, Computer and Network Security, Design and Analysis of Algorithms, Probability and Random Variables, Information Theory, Artificial Intelligence, Computer Systems Engineering, Software Construction, Real Analysis, Linear Algebra, Differential Equations, Multivariable Calculus, Wave Mechanics, Macro/Microeconomics
- Jericho High School (Jericho, NY)** June 2013  
AP National Scholar; National Merit Commended Student; Recipient of the Rensselaer Medal

## Skills

- Programming:** Python, Java, C, JavaScript, SQL, PHP, HTML/CSS, familiar with R  
**Technologies:** Git, NumPy/SciPy/Scikit-learn, Hive/Hadoop, MySQL, LaTeX, familiar with Django

## Experience

- KAYAK** May 2016 – September 2016  
**Software Engineering and Data Analytics Intern** Cambridge, MA  
-Designed algorithms to analyze large flight price datasets and generate tips about flight pricing models on a per-route basis  
-Assisted deployment of tips giving users insight into pricing models to save money on airfare
- Leiden Institute of Advanced Computer Science** January 2016  
**Visiting Researcher** Leiden, The Netherlands  
-Investigated classification and decision tree machine learning models in Python using time series data to allow intensive care doctors to make more informed decisions about blood transfusions
- Massachusetts Institute of Technology** August 2015 – August 2016  
**Undergraduate Researcher** Cambridge, MA  
-Assisted development of DataHub, a novel platform for managing and collaborating with data  
-Assisted design of a general-purpose recommendation platform using collaborative filtering
- Bloomberg LP** May 2015 – August 2015  
**R&D Software Engineering Intern** New York, NY  
-Designed and implemented a topic modeling architecture to infer abstract topics from a large corpus of legal documents, including natural language processing and parallelized computation  
-Designed quantitative metrics for model evaluation and web-based tools for topic visualization
- KAYAK** June 2014 – May 2015  
**Software Engineering and Data Analytics Intern** Cambridge, MA  
-Designed and implemented an algorithm for re-structuring links across millions of webpages to improve user experience and maximize profits, also built web interface and monitoring dashboard  
-Designed and implemented clustering model to compute similarity between hotels and cities
- Freelance Consulting and Personal Projects** June 2009 – Present  
-Designed a model that predicts Twitter follower count on live tweets using tweet text and metadata  
-Built save-science.org with Academics for the Future of Science at MIT, allowing thousands of people to easily contact Congress and support increased funding for scientific research  
-Designed a customer relation manager and donation-tracking platform for the Institute of MERIT math enrichment program at SUNY Old Westbury, used to manage hundreds of donors  
-Created StudentsThink, a resource for students to collaborate online in a forum-like setting, including developing an HTML5-based virtual whiteboard  
-Co-designed a social, music-optimizing jukebox in MIT's October 2013 Hackathon
- Ploegh Lab at Whitehead Institute for Biomedical Research** June 2012 – August 2013  
**Student Researcher** Cambridge, MA  
-Engineered novel single-domain antibodies for tumor vaccine development  
-Designed lab website and built internal databases for lab member management, lab protocol storage, lab inventory, and PubMed article fetching
- Mount Sinai School of Medicine, Department of Ophthalmology** June – August 2011  
**Student Researcher** New York, NY  
-Investigated safety and efficacy of ganciclovir as an adenovirus treatment in cell/animal models  
-Co-author at Association for Research in Vision and Ophthalmology 2012

## Research Interests

Machine Learning; Deep Learning; Data Mining; Cryptography; Performance Engineering

## Activities

World Traveling; Sailing; Skiing; Aviation (student pilot); Music (concert pianist and double bassist); Golf