

Jonathan A. Goldman

Carnegie Mellon University, SMC 5828, 5032 Forbes Avenue, Pittsburgh, PA 15213
8 Jeremy Avenue, Plainview, NY 11803 • (516) 404-1982 • jagoldma@andrew.cmu.edu

OBJECTIVE

To obtain a summer internship that will allow me to creatively apply my problem-solving and analytical skills to interesting projects.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA

Sept. 2011-Present

- Bachelor of Science in Computer Science (with a minor in Discrete Mathematics), expected May 2015
- GPA: 4.0 (Dean's List: Fall 2011, Spring 2012, Fall 2012, and Spring 2013)

Relevant Coursework: Algorithm Design and Analysis, Tech Startup Lab, Great Theoretical Ideas in Computer Science, Machine Learning, Science of the Web, Undergraduate Complexity Theory

Plainview-Old Bethpage John F. Kennedy High School, Plainview, NY

Sept. 2007-June 2011

- Regents Diploma with Advanced Designation; GPA: 101.2 (Ranked 3rd of 427); SAT: 2320/2400

TECHNICAL SKILLS

- Java, Scala, Ruby, C, SML
- HTML, CSS, JavaScript (jQuery and AJAX), Ruby on Rails, C#/ASP.NET, Real-Time (SignalR, MeteorJS), Databases (MySQL, Redis, MongoDB, Titan)

WORK EXPERIENCE

Knewton, New York, NY

Summer 2013

Software Engineering Intern

- Developed software for algorithmically-generated questions, used for creating practice materials and delivering personalized assessment content (Java, Scala) - <http://knewton.com/tech/blog/2013/09/>
 - Capable of creating problems involving complex numbers, geometry, linear algebra, chemistry, and computer science
 - Wrote a domain-specific language that allows instructors to specify question and answer text, variable constraints and formulae, and multiple choice answers
- Wrote service interfaces (Thrift, REST), developed data models and queries (Titan), and researched server debugging tools (Takipi, Zipkin) for various projects with the full stack engineering team

S&P Capital IQ, New York, NY

Summer 2012

Software Engineering Intern

- Developed real-time financial notification system for Capital IQ's website enabling clients to subscribe to custom alerts (C#)
 - Notifications sent in real-time using both database push (via Redis Pub/Sub) and server push (via WebSockets); capable of sending tens of thousands of notifications per second across Capital IQ's multi-server environment
 - Designed frontend interface including Growl-style pop-ups and a Facebook-style notification panel (jQuery)
- Researched and benchmarked real-time and distributed caching technologies for the purpose of advising developers and business analysts on the design and administration of a web-based, real-time market data workstation

RESEARCH AND ACADEMIC WORKS

Computational Social Choice Research, Supervised by Dr. Ariel Procaccia, Carnegie Mellon University

Jan. 2013-Present

- Designing, analyzing, and implementing models and algorithms for fair division of indivisible goods, with a focus on efficient methods applicable to real world scenarios
 - Building *Spliddit*, a web application that enables users to take advantage of cutting-edge research for solving everyday problems including rent division, divorce settlements, inheritance claims, and scientific credit division (Ruby on Rails)

Tech Startup Lab Project, Supervised by Dr. Luis Von Ahn, Carnegie Mellon University

Sept. 2012-May 2013

- Submitted proposal and accepted to a competitive class focused around building a technology-based start-up company
- Worked with a team of four students to create *PubblePin*, a web application that offers an engaging interface for users to create and participate in comparison-based ranking polls (Ruby on Rails)
 - Beta-tested the site (<http://pubblepin.com>) in December 2012 and received 150,000 votes from 5,500 unique visitors

Parallel Computing Research, Supervised by Dr. Yuefan Deng, Stony Brook University

June 2009-February 2012

- Developed a novel algorithm for task mapping onto parallel computers and created a simulation suite for analysis (Java)
 - Published in *New Computing Architectures and Applications* as first author (February 2012)
 - Semifinalist in Intel Science Talent Search; Finalist in Intel International Science and Engineering Fair
 - Received grant from the Simons Summer Research Fellowship Program (Summer 2010)
- Collaborated with graduate students to design and topologically analyze new supercomputer network architectures