Jonathan A. Goldman

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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