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## EDUCATION

**Columbia University, Columbia College, New York, NY**

**B.A. Candidate 2014**

*Major:* Computer Science; *Concentration:* Physics

*Major Grade Point Average:* 3.55; *Overall:* 3.41

*Relevant Coursework:* Advanced Programming in C, C++, and UNIX; Advanced Data Structures; Cryptography; Graph Theory; Computer Networks; Programming Languages and Translators; AI; UI Design; Operating Systems; Data Science; Computer Vision

**Phillips Academy Andover, Andover, MA**

**2006 – 2010**

Honors Student; AP Scholar with Distinction; SAT 99<sup>th</sup> percentile

## WORK EXPERIENCE

**Nomis Solutions, Optimization Software Engineer Intern, San Bruno, CA**

**Summer 2013**

- Worked with Optimizations and Engineering teams to develop market financial pricing optimization software
- Developed caching scheme to halve total computation time
- Modified computation parameters schema to incorporate expanded variable set enabling more efficient optimization
- Documented computational software data and provided business-friendly interpretation to be used in software demonstrations

**Columbia University, Teaching Assistant, New York, NY**

**2013 – Present**

- Courses include Honors Introduction to Computer Science and Programming Languages and Translators
- Support student learning through weekly lectures, office hours, one-on-one meetings, and online forums
- Aided in the design of homework and practice problems and grading of exams and homework for over one hundred students

**Condé Nast, Mobile App Product Development Intern, New York, NY**

**Summer 2012**

- Created several mobile app concepts, developed functionality, user interface, and marketing and business strategies
- Participated in cost and design meetings with third-party application design and development firms
- Formally presented app concept and design to magazine brands for review and funding

**Columbia University, Kim Group, Research Assistant, New York, NY**

**2011 – 2012**

- Measured thermopower in Graphene on BN samples in Helium cryostasis chamber
- Worked frequently in a clean room environment, involving use of strong acids and precision measurement and fabrication equipment including AFM, SEM, e-beam evaporator and cryostat control and measurement software

## ATHLETICS

**Columbia Men's Varsity Swim Team, NCAA Division I**

**2010 – 2012**

- 2012 Pool Record Holder 200 freestyle Relay
- Best Times: 50 freestyle: 20.89; 100 freestyle: 47.60
- Trained 20+ hours weekly, including 6:30 A.M. practice daily

## ACTIVITIES AND PROJECTS

**Columbia University Society of Automotive Engineers**

**2010 – 2013**

- As System Head for Controls, participated in the building of a Formula-style racecar for competition with other universities and professional teams worldwide; role involved design of a new space-efficient and lightweight pedal and control system
- Designed and implemented new impact attenuator design, based on EPS insulation foam, to reduce weight and improve the car's efficiency; implementation involved static and quasi-static testing and energy-absorption analysis

**Application Development Initiative**

**2013 – Present**

- As part of the Infrastructure Team, helping redesign and develop several web-applications for the Columbia student body including university data API and interactive course scheduler

**WDJC: The WHET DJ Language Compiler for Musical Composition**

**Fall 2013**

- Semester-long project for Columbia Programming Languages and Translators (COMSW4115) course: as Team Leader, with 3 teammates, created and formalized the DJ Programming Language for MIDI musical composition; designed and implemented the WDJC compiler for the DJ language, producing MIDI sound files from DJ source

**Linger.io**

**Spring 2013**

- At Columbia University hackathon, DevFest, created a Python Flask web app to allow users to view their phone's contacts and message threads, as well as send and receive messages and calls directly from within the app
- Linger won DevFest's *Best Use of Twilio* award. I am continuing development of the app and its business model in an Entrepreneurship class at Columbia

## SKILLS

- Experienced in HTML, CSS, Javascript, Python, Flask, TeX, JAVA, C, OCaml and UNIX programming languages
- Electrical Engineering, computer design and circuit analysis and creation of several projects, including reaction tester and computer-controlled thermal bitmap printer
- Mechanical Engineering, 3-D computer design and mechanical analysis using Creo design software, including innovative pedal-box system and impact attenuator for FSAE car as well as several machines, puzzles, and toys on Thingiverse and Shapeways
- Woodwork and Fine Cabinetry, design and construction of various projects including tables, games, machines, and bookcases as well as a 14-foot skiff built from raw materials