TIMOTHY L GOODWIN

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EDUCATION

COLUMBIA UNIVERSITY, Fu Foundation School of Engineering and Applied Science

New York, NY

Pursuing B.S. in Computer Science, minor in Electrical Engineering

Expected May 2017

Cumulative GPA (as of Spring 2016): **3.68** Honors: **Dean's List** (Fall 2013 — Present)

WORK AND RESEARCH EXPERIENCE

Wireless & Mobile Networking Laboratory, Columbia University

New York, NY 2016 - Present

Undergraduate Researcher

Adaptive Multicast Services: Developing solutions for wireless multimedia content delivery in crowded venues where networks are overloaded due to a lack of wireless spectrum.

Goldsmith & Co.

New York, NY

Software Development Intern

Fall 2015 - Present

Full stack development of company client management system. Development includes UI/UX design, relational databases, prototyping, quality and performance testing, and release management.

Research Group of Dr. Richard Osgood Jr, Columbia University

New York, NY

Undergraduate Researcher, Photonic Devices Laboratory

Spring/Summer 2015

Researching nanophotonic devices involving newly developed fabrication techniques. Research is heavily focused on developing passive crystal devices for lightwave frequency conversion, applications to optical computing, fiber-optic communications, and biomedical laser technology.

Integral Group, Inc.

Los Angeles, CA

Engineering Intern, Data Science

Summer 2014

Wrote scripts to process sunlight and climate data collected at planned project sites. Used climate and materials data to mathematically model energy usage for proposed building projects. Integrated sunlight and wind data with existing architectural modeling to create graphics depicting the build plan's energy optimization strategies.

California Institute of Technology

Pasadena, CA

Student Researcher, Solar Materials Discovery Program

2010 - 2013

Combinatorially tested the photoactivity of various metal oxide compounds in pursuit of a cheap solar cell material that could use sunlight to produce hydrogen fuel from water. Developed new methods for synthesizing metal oxide films on electrically conductive glass. Documented newly developed research methods so procedures could be reimplemented in a high school environment.

TECHNICAL SKILLS

Programming: Extensive experience with C, Python, Java, Javascript, HTML5/CSS, Git Experience with C++, MySQL, MongoDB, Node.js

EXTRACURRICULAR INVOLVEMENTS

Web Developer, Rare Candy Magazine	New York, NY
Site design and maintenance, developer for map-based music discovery web app	Summer 2015 - Present
Webmaster, Alpha Delta Phi Society, Columbia Chapter	New York, NY
Developing and maintaining the chapter's webpage and internal databases	Spring 2015 — Present
Radio Programmer, WBAR Barnard College Freeform Radio	New York, NY
Hosting a radio show for three consecutive years, current show titled Everything So Far	Fall 2014 - Present