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William Falk-Wallace

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EDUCATION

Columbia University, Columbia College, *New York, NY* **B.A. Candidate 2014**
Major: Computer Science; *Concentration:* Physics
Grade Point Average: Computer Science Major: 3.55; *Overall:* 3.41
Relevant Coursework: Advanced Programming in C, C++, and UNIX; Advanced Data Structures; Cryptography and Coding Theory; Combinatorics and Graph Theory; Computer Networks; Programming Languages and Translators; Artificial Intelligence; UI Design
Phillips Academy Andover, *Andover, MA* **2006 – 2010**
Honors Student; AP Scholar with Distinction; SAT 99th percentile

WORK EXPERIENCE

Nomis Solutions, Optimization Software Engineer, *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 for Honors Introduction to Computer Science, *New York, NY* **Spring 2013**
- Support student learning through weekly lectures, office hours, one-on-one meetings, and online forums
- Aided in the design of homework and practice problems
- Responsible for grading exams and bi-weekly homework assignments for over seventy students

Condé Nast, Mobile App Product Development Intern, *New York, NY* **Summer 2012**
- Performed in-depth market and brand research, including use of Adobe Omniture web-analytics software
- 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
- Collaborated with international labs; exchanged various fabricated samples for measurement
- 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

WPAA Radio, Director, *Andover, MA* **2008 – 2010**
- Established and enacted goals for streaming online student radio station, including extended hours, advanced programming, and sponsored events and performances
- Managed disk jockey and proctor schedules; read show and board applications; ensured show behavior complied with FCC and school regulations

ATHLETICS

Columbia Men's Varsity Swim Team, NCAA Division I **2010 – 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 – Present**
- As System Head for Controls, participated in the building of a Formula-style racecar for competition with other universities and professional teams worldwide
- 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

Woodwork and Fine Cabinetry **2003 – Present**
- Planned and constructed a 14-foot skiff from raw materials
- Various other projects including tables, games, machines, and bookcases

SKILLS

- Experienced in HTML, CSS, Javascript, TeX, JAVA, C, OCaml and UNIX programming languages
- Knowledge of conversational and written French
- 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