

Timothy K. Paine

Contact	11 Lincoln Lane, New Providence, NJ 07974 t.paine154@gmail.com 908.721.1185
Education	Columbia University in the City of New York — New York, NY Fu Foundation School of Engineering and Applied Sciences '15 – M.S. in Computer Engineering Fu Foundation School of Engineering and Applied Sciences '15 – B.S. in Computer Engineering Columbia College '14 – B.A. in Computer Science/Mathematics Sophia University — Tokyo, Japan
Work Experience	Credit Suisse — Equities/Quantitative Analyst Intern — Tokyo, Japan — Summer 2014 <ul style="list-style-type: none">• Mined Bloomberg earnings data to model company performance• Modeled price movement and built predictions for 1-30 days in the future• Analyzed time series using wavelet analysis IBM — Software Group Intern — Dublin, OH — Summer 2013 <ul style="list-style-type: none">• Worked on IBM's Multi-Enterprise gateway project as part of a suite of B2B business software• Experience included enterprise java programming, as well as python, javascript, and HTML/CSS• Gained experience in Agile development methodology working for a large multinational company Columbia University — Teaching Assistant — New York, NY — Fall 2012-Present <ul style="list-style-type: none">• Advanced Programming — Spring 2013, Fall 2013• Fundamentals of Computer Systems — Fall 2013• Introduction to Combinatorics and Graph Theory — Fall 2012• Introduction to Programming for Scientists and Engineers — Spring 2014, Fall 2014 Columbia University — Tutor — New York, NY — Fall 2012-Present <ul style="list-style-type: none">• Ordinary Differential Equations• Fundamentals of Computer Systems
Projects	Architecture and Design Lab — Research Assistant — New York, NY — Summer 2012-Present <ul style="list-style-type: none">• Model various SQL functions in SystemVerilog• Synthesize the models to produce area, power, and timing numbers• Perform FPGA prototyping Facebook Open Academy — OpenStack Team — Spring 2014 <ul style="list-style-type: none">• Built two-factor authentication for OpenStack's Keystone Identity Service• Integrated two-factor authentication with OpenStack's Horizon UI and dashboard
Publications	Q100: The Architecture and Design of a Database Processing Unit. L.Wu, A. Lottarini, T. Paine, M. Kim, K.Ross ASPLOS 2014: Nineteenth International Conference on Architecture Support for Programming Languages and Operating Systems.
Leadership Positions	Beta Theta Pi Fraternity Vice President, Treasurer, Recruitment Chair (twice), House Manager, InterFraternity Council Representative, Webmaster <ul style="list-style-type: none">• Helped expand the chapter from 20 members to more than 45• Organized various philanthropic and educational events, including charity concerts, volunteer work in Harlem and the Bronx, and guest lectures by Columbia faculty• House manager of our 114th Street Brownstone• Attended various leadership conferences and leadership training events. Columbia Judo Club Vice President Columbia Japan Society Webmaster Knickerbocker Motorsports (Formula Society of Automotive Engineers) <ul style="list-style-type: none">• Worked on securing partnerships with sponsors• Have taken a hands-on role with the electronics of our Formula Race car

Skills	<p>Programming Languages Proficient Java, C, C++, Python, Verilog, SystemVerilog, R, SystemC In Progress Matlab, Javascript, VHDL, OCaml, C#, Ruby, Clojure, Perl, Lua</p> <p>Tools, Platforms, Databases HTML/CSS, Flask, Django, 10x (IBM), *nix, Os X, Windows, Microsoft Office, VBA, Latex, Git, Svn, Hg, Github/Bitbucket, Agile, Bloomberg, Oracle, IBM DB2, Apache Derby, Postgres, MongoDB, Hadoop (Yarn, HDFS, Pig, Hive, HBase, Oozie, Mahout)</p>
Relevant Courses	<p>Computer Science Algorithms, Combinatorics/Graph Theory, Operating Systems, Programming Languages and Translators, Databases, Cloud Computing & Big Data, Big Data Analytics</p> <p>Computer Engineering Advanced Logic Design, Embedded Systems, Computer Architecture, Computer Networks, Computer Hardware Design, System on Chip Platforms</p> <p>Mathematics ODE, PDE, Modern Analysis, Modern Algebra, Topology</p> <p>Other Business Japanese, Stochastic Modeling, Statistical Machine Learning, Quantitative Methods in Investment Management, Design and Agile Project Management Engineering Lab</p>
Awards and Honors	<p>Theodore R. Bashkow Award — 2014 — Columbia University Computer Science Department National Merit Scholarship Winner — 2010 Edward J. Bloustein Distinguished Scholar — 2010 Junior Engineering Technical Society (JETS) — Best in State — New Jersey — 2010 AP Scholar — 2010 All State Jazz Ensembles (Guitar) New Jersey Youth Symphony (Violin) Panasonic Creative Design Challenge — Finalist — 2009,2010 YMCA New Jersey Youth and Government YMCA Model United Nations Secretary General, Vice Chair - European Union, Vice Chair - General Assembly, Conference on National Affairs (CONA) Selectee, Youth Governor's Conference Attendee</p> <ul style="list-style-type: none"> • A weekend long conference held in Hershey Park, PA, and attended by ~1600 HS students • I chaired two committees, and was elected in 2009 to lead the next conference as the Secretary General, where I was in charge of 40 committees and 1600 delegates • I directed the other officers, assisted in the planning of several major programs, including both a weekend-long charity drive and a mock "crisis" scenario. • I not only developed strong public speaking skills (debating in front of 1600 high school students is a daunting experience), but also learned critical leadership skills and gained global perspective • I was chosen to attend a conference in Washington, DC, where I spoke with congresspeople, senators, lobbyists, and other leaders in the capitol. • I attended CONA, a weeklong conference of the premier delegates from the various states
Clubs and Activities	<p>Musical Brazilian Jazz Ensemble (Guitar), Afro-Cuban Jazz Ensemble (Guitar), Afro-Columbia Jazz Ensemble (Guitar), Columbia Ski Team</p> <p>Academic Order of Omega Honor Society, IEEE, Application Development Initiative (ADI), Columbia International Relations Council, Association for Computing Machinery (ACM), Columbia Undergraduate Math Society</p> <p>Athletic Columbia Ski Team, Columbia Judo Club</p>
References	Available upon request