

## Timothy K. Paine

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Education	<b>Columbia University in the City of New York — New York, NY</b> 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 <b>Sophia University — Tokyo, Japan</b>
Work Experience	<b>Credit Suisse — Equities/Quantitative Analyst Intern — Tokyo, Japan — Summer 2014</b> <ul style="list-style-type: none"><li>• Mined Bloomberg earnings data to model company performance</li><li>• Modeled price movement and built predictions for 1-30 days in the future</li><li>• Analyzed time series using wavelet analysis</li></ul> <b>IBM — Software Group Intern — Dublin, OH — Summer 2013</b> <ul style="list-style-type: none"><li>• Worked on IBM's Multi-Enterprise gateway project as part of a suite of B2B business software</li><li>• Experience included enterprise java programming, as well as python, javascript, and HTML/CSS</li><li>• Gained experience in Agile development methodology working for a large multinational company</li></ul> <b>Columbia University — Adjunct Professor — New York, NY — Summer 2015</b> <ul style="list-style-type: none"><li>• Teaching ENGI1006 Introduction to Programming for Scientists and Engineers</li></ul> <b>Columbia University — Teaching Assistant — New York, NY — Fall 2012-Present</b> <ul style="list-style-type: none"><li>• Advanced Programming — Spring 2013, Fall 2013</li><li>• Computer Architecture — Spring 2015</li><li>• Fundamentals of Computer Systems — Fall 2013</li><li>• Introduction to Combinatorics and Graph Theory — Fall 2012</li><li>• Introduction to Programming for Scientists and Engineers — Spring 2014, Fall 2014, Spring 2015</li></ul>
Projects	<b>Architecture and Design Lab — Research Assistant — New York, NY — Summer 2012-Present</b> <ul style="list-style-type: none"><li>• Model various SQL functions in SystemVerilog</li><li>• Synthesize the models to produce area, power, and timing numbers</li><li>• Perform FPGA prototyping</li></ul> <b>Computer Architecture and Security Technology Lab — Research Assistant — Fall 2014-Present</b> <ul style="list-style-type: none"><li>• Building a hybrid HW/SW RSA unit for Freedom.press in SystemVerilog</li></ul> <b>Embedded Scalable Platforms — Fall 2014-Present</b> <ul style="list-style-type: none"><li>• Building a Hardware Accelerator for Latent Dirichlet Allocation in SystemC</li></ul> <b>Facebook Open Academy — OpenStack Team — Spring 2014</b> <ul style="list-style-type: none"><li>• Built two-factor authentication for OpenStack's Keystone Identity Service</li><li>• Integrated two-factor authentication with OpenStack's Horizon UI and dashboard</li></ul> <p>Current projects can be found at <a href="http://www.cs.columbia.edu/~tkp2108/">http://www.cs.columbia.edu/~tkp2108/</a></p>
Publications	<b>Q100: The Architecture and Design of a Database Processing Unit.</b> L.Wu, A. Lottarini, T. Paine, M. Kim, K.Ross ASPLOS 2014: Nineteenth International Conference on Architecture Support for Programming Languages and Operating Systems. IEEE Micro Top Pick.

Skills	<b>Programming Languages, Tools, Platforms, Databases, Relevant Courses</b> Please see <a href="http://www.cs.columbia.edu/~tkp2108/">http://www.cs.columbia.edu/~tkp2108/</a>
Awards and Honors	<b>Theodore R. Bashkow Award</b> — 2014 — Columbia University Computer Science Department <b>Margarete E. Kennedy Estate Scholarship</b> — 2010 — Columbia University <b>Jerry and Evelyn Bishop Scholarship</b> — 2015 — Columbia University  <b>National Merit Scholarship Winner</b> — 2010 <b>Edward J. Bloustein Distinguished Scholar</b> — 2010 <b>AP Scholar</b> — 2010 <b>Junior Engineering Technical Society (JETS)</b> — Best in State — New Jersey — 2010 <b>Panasonic Creative Design Challenge</b> — Finalist — 2009,2010  <b>All State Jazz Ensembles</b> (Guitar) <b>New Jersey Youth Symphony</b> (Violin)  <b>YMCA Model United Nations</b> Secretary General, Vice Chair - European Union, Vice Chair - General Assembly, Conference on National Affairs (CONA) Selectee, Youth Governor's Conference Attendee <ul style="list-style-type: none"> <li>• A weekend long conference held in Hershey Park, PA, and attended by ~1600 HS students</li> <li>• 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</li> <li>• 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.</li> <li>• 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</li> <li>• I was chosen to attend a conference in Washington, DC, where I spoke with congresspeople, senators, lobbyists, and other leaders in the capitol.</li> <li>• I attended CONA, a weeklong conference of the premier delegates from the various states</li> </ul>
Clubs and Activities	<b>Musical</b> Brazilian Jazz Ensemble (Guitar), Afro-Cuban Jazz Ensemble (Guitar), Afro-Columbia Jazz Ensemble (Guitar), Columbia Ski Team  <b>Academic</b> Order of Omega Honor Society, IEEE, Application Development Initiative (ADI), Columbia Undergraduate Math Society, Columbia Japan Society ( <b>Webmaster</b> ), Knickerbocker Motorsports/ FSAE  <b>Athletic</b> Columbia Ski Team, Columbia Judo Club ( <b>Vice President</b> )  <b>Beta Theta Pi Fraternity</b> Vice President, Treasurer, Recruitment Chair (2 Terms), House Manager, InterFraternity Council Representative, Webmaster
References	Available upon request