

Timothy K. Paine

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| 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• Computer Architecture — Spring 2015• 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, Spring 2015 |
| 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 Current projects can be found at http://www.cs.columbia.edu/~tkp2108/ |
| 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. IEEE Micro Top Pick. |
| Skills | Programming Languages Proficient Java, C, C++, Python, Verilog, SystemVerilog, R, SystemC In Progress Matlab, Javascript, VHDL, OCaml, C#, Ruby, Clojure, Perl, Lua 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) |

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| Relevant Courses | <p>Computer Science Algorithms, Combinatorics/Graph Theory, Operating Systems, Programming Languages and Translators, Databases, Cloud Computing & Big Data, Big Data Analytics, GPU Computing</p> <p>Computer Engineering Advanced Logic Design, Embedded Systems, Computer Architecture, Computer Networks, Computer Hardware Design, System on Chip Platforms, Embedded Scalable 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 Margarete E. Kennedy Estate Scholarship — 2010 — Columbia University Jerry and Evelyn Bishop Scholarship — 2015 — Columbia University</p> <p>National Merit Scholarship Winner — 2010 Edward J. Bloustein Distinguished Scholar — 2010 AP Scholar — 2010 Junior Engineering Technical Society (JETS) — Best in State — New Jersey — 2010 Panasonic Creative Design Challenge — Finalist — 2009,2010</p> <p>All State Jazz Ensembles (Guitar) New Jersey Youth Symphony (Violin)</p> <p>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 <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 </p> |
| 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 Undergraduate Math Society, Columbia Japan Society (Webmaster), Knickerbocker Motorsports/ FSAE</p> <p>Athletic Columbia Ski Team, Columbia Judo Club (Vice President)</p> |
| References | Available upon request |