Timothy K. Paine

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Education

Columbia University in the City of New York — New York, NY
Fu Foundation School of Engineering and Applied Sciences
 M.S. in Computer Engineering — 2015
 B.S. in Computer Engineering, *Magna Cum Laude* — 2015
Columbia College
 B.A. in Computer Science/Mathematics — 2015

Sophia University — Tokyo, Japan — Summer 2011

Work Experience

J.P. Morgan
Athena Core Developer   March 2016 - Present
 Develop real time analytics platforms **(Python, C++)**

MayStreet
Software Engineer   July 2015 - January 2016
 Developed low latency market data and order entry systems **(C++, C#, Java)**
 Developed market data analytics platforms **(Python, C++, and R)**

Columbia University
Adjunct Associate Professor   Summer 2015 - Present
 ENGI1006 Introduction to Computing for Scientists and Engineers (**Python**)
 COMS3101 Programming Languages - **Python**
 COMS3101 Programming Languages - **C++**
 COMS1005 Introduction to Computer Science and Programming in **Matlab**

Credit Suisse
Equities/Quantitative Analyst Intern – Tokyo, Japan   Summer 2014
 Built predictive models for company earnings and price movement
 Leveraged data mining, machine learning, and wavelet analysis **(R, Python)**

IBM
Software Group Intern   Summer 2013
 Developed and tested front ends for B2B applications **(Python, javascript)**
 Gained experience in Agile development methodology

Columbia University
Teaching Assistant   Fall 2012 - Spring 2015
 Advanced Programming
 Computer Architecture
 Fundamentals of Computer Systems
 Introduction to Combinatorics and Graph Theory
 Introduction to Computing for Scientists and Engineers

Projects	**Architecture and Design Lab**
	Researcher Summer 2012 - Spring 2015
	Hardware Design/Verification/Synthesis and FPGA prototyping of a database accelerator (**Verilog**, **SystemVerilog**, **Altera** toolchain and FPGAs, **Synopsys** synthesis tools)

Projects

Architecture and Design Lab
Researcher   Summer 2012 - Spring 2015
    Hardware Design/Verification/Synthesis and FPGA prototyping of a database accelerator
    (**Verilog**, **SystemVerilog**, **Altera** toolchain and FPGAs, **Synopsys** synthesis tools)

Computer Architecture and Security Technology Lab
Researcher   Fall 2014 - Spring 2015
    Built a hybrid HW/SW Cryptography unit in SystemVerilog targeting a custom FPGA board
    (**SystemVerilog**, **Altera** toolchain and FPGAs)

Embedded Scalable Platforms   Fall 2014 - Spring 2015
    Built a Hardware Accelerator for Latent Dirichlet Allocation in SystemC
    (**SystemC**, **Xilinx** toolchain and FPGAs, **Cadence** CtoS/Cynthesizer/Stratus)

Facebook Open Academy
OpenStack Team   Spring 2014
    Built two-factor authentication for OpenStack's Keystone Identity Service
    Integrated two-factor authentication with OpenStack's Horizon UI and dashboard
    (Python)

Current projects can be found at http://tim.paine.nyc

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.**

Awards/Honors

Theodore R. Bashkow Award
Columbia University Computer Science Department — 2014

MSTA Fellowship
Columbia University — 2015 — Full Tuition for Master's Degree

Jerry and Evelyn Bishop Scholarship
Columbia University — 2015

Margarete E. Kennedy Estate Scholarship
Columbia University — 2010

Japan Student Services Organization (JASSO)
Sophia University — 2011

National Merit, Advanced Placement, and other pre-college honors
Please see http://tim.paine.nyc

References   Available upon request