

# David J. Watkins

✉ 2920 Broadway 7451 Lerner Hall NY, NY 10027

✉ [djw2146@columbia.edu](mailto:djw2146@columbia.edu) | 🌐 <http://davidwa.tkins.me> | ☎ 508.380.5474

## Education

**Columbia University** | Fu Foundation of Applied Science

**B.S. in Computer Science** with Computer Systems Track | Class of 2016 | 3.6 GPA | 3.7 GPA in Major

**M.S. in Computer Science** with Computer Systems Track | Class of 2017

Coursework: Tech Entrepreneurship, Database Implementation, Operating Systems, Networking Principles, Database Systems Implementation, GPU Computing, Programming Languages and Translators, Analysis of Algorithms, Embedded Systems, Computer Graphics

**Marian High School** | Class of 2012 | Salutatorian | 4.0 GPA | Class President

## Professional Experience

**Goldman Sachs** New York, NY

June 2016-August 2016

- Worked in Margin Technology to prioritize calculations using a graph DBMS and provided an interface to adjust the prioritizations
- Developed in **Java** and **Angular.js** to build both the database queries and the user experience

**Goldman Sachs** New York, NY

May 2015-August 2015

- Worked in Valuations Technology to rebuild an FVA Gating Tool which allowed Operations Users to give clients info statements
- Developed in **Angular.js** and **Slickgrid** to build a convenient user experience while collaborating with fellow interns

**Streakfire LLC** Wayland, MA and Dorado, PR

June 2014-September 2014

- Producing an ad campaign in Puerto Rico to promote a technical accelerator to help create jobs for graduated college students
- Coordinating with local government to leverage their expertise in publicity and existing infrastructure

## Research Experience

**Research in Bit Width Resolution** New York, NY

January 2016-May 2016

- Worked with Professor Stephen Edwards at Columbia University to add **Z3**'s SMT framework to an existing compiler project in order to resolve variable bit widths at compile time
- A comprehensive report of the research can be found at: <http://davidwa.tkins.me/file/EdwardsResearch.pdf>

**Research in Data Visualization** New York, NY

September 2015-December 2015

- Worked with Professor John Kender at Columbia University to provide visualization of the correlation between visual and textual memes in online video data and provided an analysis on the most effective ways of visualizing co-clustered data
- A comprehensive report of the research can be found at: <http://davidwa.tkins.me/file/KenderResearch.pdf>

**Research in the Production of Litecoin ASICs** New York, NY

January 2014-May 2014

- Cooperated with Professor Simha Sethumadhavan on the feasibility of producing Litecoin Mining ASICs
- Independently designed all of the ASIC schematics, performed cost-benefit analysis of the ASIC and maintained knowledge on which crypto-currencies were most profitable at any time. The report can be found at: <http://davidwa.tkins.me/file/ASICPaper.pdf>

## Technical Skills

### Programming Languages:

- Java, C/C++, Ocaml, PHP, Node.js, HTML5, CSS, Javascript (+jQuery+AngularJS), Python, MySQL, Bash, VHDL, SystemVerilog

### Operating Systems, Applications, and APIs

- Proficient in Linux, Unix, and Windows (Preferred desktop)
- Apache, Git, IntelliJ, ftp, ssh, Paint.net, Sublime Text, Brackets, VMWare Workstation, Chocolatey

## Interests

- Participated in psychological research for LIRSM and Yale
- Authorized by Columbia Bartending Agency to be a bartender – including formal occasions
- Rebuilt word2vec, a machine learning algorithm into CUDA as a GPU Computing project
- TA'd for four semesters and taught two lectures and one recitation. **Honors Java, Computer Systems, and Compiler Design**

## References – Email to set up appointment

Stephen Edwards – [sedwards@cs.columbia.edu](mailto:sedwards@cs.columbia.edu) | Simha Sethumadhavan – [simha@cs.columbia.edu](mailto:simha@cs.columbia.edu) | Sebastian Jastrzebski – [info@streakfire.com](mailto:info@streakfire.com) | John Kender – [jrk@cs.columbia.edu](mailto:jrk@cs.columbia.edu)

LinkedIn: <https://www.linkedin.com/in/davidwatkinsj> | Facebook: <https://facebook.com/Davidwme> | Github: <https://github.com/DavidWatkins> | Twitter: [https://twitter.com/davidw\\_me](https://twitter.com/davidw_me)