

# Jason Fan

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## EDUCATION

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### Tufts University, Boston

*Expected May 2017*

B.S. in Computer Science & Mathematics

GPA: 3.89 / 4.00, Dean's List (Fall 2013 - present)

Relevant courses: *Data Structures, Algorithms, Graphics, Visualization, Programming Languages, Web Programming, Text Mining, Computation Theory, Abstract Algebra, Linear Algebra, Calculus*

## EXPERIENCE

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### Microsoft

June - September 2016 (12 weeks)

*Software Development Intern, Enterprise Cloud Group, Engineering Systems*

*Redmond, WA*

- Implemented a service, backed by Azure DocumentDB that allows users to launch and monitor the customization of Virtual Machines on an internal cloud service, in C#.

### Teaching Assistant - Fall 2015 and Spring 2016

January - May 2016

*Machine Structure & Assembly Language Programming (Fall 2015), Computation Theory (Spring 2016)*

- Led and assisted lab sessions, and held office-hours weekly, helping students with Machine Structure problems in C in the fall of 2015.
- Held regular office-hours to help students understand questions about NP-completeness, graph-theory and proof writing in the spring of 2016.

### Ab Initio Software

June - August 2015 (11 weeks)

*Software Development Intern*

*Boston, MA*

- Wrote Java code that currently ships on Ab Initio's process management and monitoring client
- Shipped, built and helped design feature that allows administrators to customize the clients dashboard
- Refactored a collection of anonymous data-structures into a type-safe and easily extensible class hierarchy
- Shipped a Package for Support feature that collected and packaged information about a monitored process.

### Microsoft

June - July 2013 (5 weeks)

*Marketing Intern, Consumer Channels Group, Xbox Team*

*Hong Kong, China*

- Evaluated and categorized over two-thirds Xbox One retailer stores in Hong Kong
- Presented and participated at an Asia Pacific Region CCG Train-the-Trainer event for Xbox and Surface Teams.

## PROJECTS

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### Ray Traced Constructive Solid Geometry Renderer

Spring 2016

*Computer graphics project written in C++ using OpenGL*

- Devised and implemented a method to express complex boolean and set operations applied to 3D shapes
- Implemented a ray tracer that rendered photorealistic reflections, soft shadows and used recursive programming language constructs to render complex scenes.

### Force Directed Edge Bundling Methods, Models, and Implementations

Fall 2015

*A visualization technique implemented in Java and the 'Processing' Framework/Library*

- Improved and implemented a physics based, iterative method of grouping edges to simplify complex graphs.
- Collaborated with 2 other team members leading the implementation and improving of mathematical model that powered our solution.

### Visualizing the Urbanization of the World with Wikipedia data

Spring 2015

*Python, JavaScript, D3*

*Text Mining in the Humanities, Class Project*

- Parsed 60GB of Wikipedia markup to create a web application to explore when and where settlements around the world were established.

### Stealth Shrooms Game - Boston Game Jam 2015

Spring 2015

- Built a hallucination simulation game using Unity and C# with a team of 2 artists and 4 programmers in 2 days.

## SKILLS

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<b>Languages</b>	C/C++, Python, JavaScript, C#, LaTeX, ML, (Worked with: Java, HTML)
<b>Frameworks</b>	Node.js, MongoDB, ASP.NET Core (Worked with: SQL, OpenGL, D3)
<b>Tools</b>	Vim, Unix, Git & Github, Perforce, IntelliJ, Visual Studio, Powershell
<b>Other Languages</b>	Mandarin and Cantonese, proficient in spoken spanish