

# Raymond Liu

Email | [rl27@princeton.edu](mailto:rl27@princeton.edu)  
Phone | (541) 602-0508  
Website | <https://www.cs.princeton.edu/~rl27/>

## Education

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<b>Crescent Valley High School, Corvallis, OR</b> Cumulative GPA: 4.00	Fall 2016 – Spring 2019
<b>Oregon State University, Corvallis, OR</b> Cumulative GPA: 4.00 (75 credits as a non-degree student) Focus on Computer Science and Mathematics Relevant coursework: Vector Calculus, Differential Equations, Linear Algebra Intro to CoS 1 and 2, Data Structures, Web Development General Physics with Calculus 1, 2, and 3	Fall 2014 – Spring 2019
<b>Princeton University, Princeton, NJ</b> Major: Computer Science	Fall 2019 – Present

## Official Testing

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AP U.S. Government & Politics	5	May 2019
SAT Math / Reading & Writing	800 / 750	Aug 2018
SAT Physics Subject	800	June 2017
SAT Math II Subject	800	May 2017
AP Physics C: Mechanics	5	May 2017
AP Physics C: Electricity & Magnetism	5	May 2017
AP Calculus BC	5	May 2016

## Honors, Awards, and Achievements

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<b>Qualified for USA Junior Math Olympiad</b> (One of 156 qualifiers worldwide)	Apr 2018
<b>Qualified for American Invitational Mathematics Examination</b>	2016-2018
<b>Oregon Invitational Mathematics Tournament - 3rd Place (Team Event)</b>	May 2018
<b>Oregon Invitational Mathematics Tournament - 4th Place (Calculus)</b>	May 2017
<b>Intel Northwest Science Expo (NWSE) Finalist</b>	Apr 2017
<b>IEEE Excellence in Computer Science Award at Intel NWSE</b>	Feb 2017
<b>Central Western Oregon Science Expo Finalist</b>	Feb 2017
<b>Yale Science and Engineering Award in Computer Science at Central Western Oregon Science Expo</b>	Feb 2017

## Work/Research Experience

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### Research Assistant at Princeton University

Worked on a visual learning project on optical flow. Developed a system for annotating images and predicting ground truth optical flow from annotation pairs.

June 2020  
– Aug 2020

### Research Assistant at Oregon State University

Worked on a deep learning project designed to determine whether deep neural networks make decisions based on meaningful visual concepts  
Trained the network on images of birds and focused on concepts such as wings, eyes, and beaks

July 2019  
– Aug 2019

### Computer Graphics Internship at Oregon State University

Designed a simple ray tracer / image renderer from scratch using C++  
Tested and implemented a variety of methods to increase image realism and accelerate rendering speed

June 2018  
– Aug 2018

### Teaching Assistant For CS162 at Oregon State University

Guided students during regular office hours and on Canvas  
Graded and provided feedback for projects and labs

Sept 2017  
– Mar 2018

### Application Development / Computer Science Projects

Designed and developed a web interface that allows users to automatically block advertisements in podcasts – still in progress  
Designed and developed a Google Play Store application that allows users to create simple quaternary search trees – uses Unity game engine

Aug 2017  
– Present

### Intel Science and Engineering Fair

Continued prior research on developing a method for the diagnosis of Alzheimer's disease using deep convolutional neural networks.  
Implemented a technique to further increase the stability and accuracy of the existing neural network.

Feb 2016  
– Sep 2017

## Skills

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C++	Proficient
C	Proficient
Java	Proficient
Python	Familiar
HTML, CSS, JavaScript, JQuery	Proficient
LaTeX	Familiar

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