

# Eileen J. Choe

## Curriculum Vitae

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## Education

2018 - **PhD in Computer and Information Science**, *University of Pennsylvania*, Philadelphia, PA,  
Advisors: Susan Davidson and Zachary Ives

2014–2018 **BS in Computer Science**, *Loyola Marymount University (LMU)*, Los Angeles, CA  
Minor in Applied Mathematics  
University Honors Program  
Cumulative GPA: 4.0/4.0

## Experience

May 2018 – **Software Engineering Intern**, BLUE ORIGIN, Kent, WA

August 2018 Developed a time series data visualization library for real time analysis of flight and test data for the New Shepard reusable launch system, a vertical-takeoff, vertical-landing, suborbital crewed rocket.

January 2017– **Undergraduate Researcher**, *GRNsight*

May 2018 Research Advisors: John Dondi Dionisio, Ph.D., Professor of Computer Science  
Kam Dahlquist, Ph.D., Professor of Biology

Developed software for visualizing expression data of small- to medium-sized gene regulatory networks.

June 2017 – **Software Engineering Intern**, BLUE ORIGIN, Kent, WA

August 2017 Developed interactive user interfaces and implemented client side state management for enterprise web applications used for rocket development and manufacturing. Deployed an analytics platform to track and analyze user data across multiple enterprise applications.

September 2016 – **Academic Part Time Intern**, NASA JET PROPULSION LABORATORY, Pasadena, CA

January 2017 Developed a data analysis pipeline for Radiation Budget Instrument (RBI) thermopile detector chip aging characterization tests, reducing individual test analysis time by over 50%. Programmed an application which analyzes reliability trends between components used in CubeSATS and in "flagship" JPL missions.

June 2016 – **Parts Engineering Intern**, NASA JET PROPULSION LABORATORY, Pasadena, CA

August 2016 Analyzed data and provided technical recommendations for a performance and aging characterization study of the Radiation Budget Instrument (RBI) thermopile detector chip. Supported Parts Engineering group in optics research, parts list management and analysis, and Analysis and Test Lab cost forecasting.

May 2015 – **Electrical Engineering Intern**, RAYTHEON SPACE AND AIRBORNE SYSTEMS, El Segundo, CA

August 2015 Performed risk assessment of a rectifier diode through research and qualification testing to characterize suitability for use across Raytheon product line. Performed parts obsolescence reviews and drafted Raytheon Vendor Control Drawing and Change Notice documents.

## Additional Experience

Sept 2014 – **Alternative Breaks Coordinator**, *Loyola Marymount University Center for Service and Action*

May 2015 Coordinated two alternative break (AB) social justice immersion trips (Haiti: Food Justice and Agriculture and Puerto Rico: Organic Farming and Sustainability). Co-directed annual Alternative Breaks Film Festival, where student documentaries were shown to raise awareness of social justice issues in the community.

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## Publications

- 2016 Ray Toal, Rachel Rivera, Alexander Schneider, and Eileen Choe. 2016. Programming Language Explorations. Chapman & Hall/CRC.

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## Presentations

- March 2018 **Loyola Marymount University Undergraduate Research Symposium (Los Angeles, CA)**  
Research Advisors: John David Dionisio, Ph.D. and Kam Dahlquist, Ph.D.  
Oral Presentation: "Extending the Visualization Capabilities of GRNsight: a Web Application for Visualizing Models of Gene Regularization Networks"
- Nov 2017 **Southern California Conferences for Undergraduate Research (Pomona, CA)**  
Research Advisors: John David Dionisio, Ph.D. and Kam Dahlquist, Ph.D.  
Oral Presentation: "GRNsight v2: a web application for visualizing models of small gene regulatory networks"
- October 2017 **Society of Women Engineers Undergraduate Research Competition (Austin, TX)**  
Research Advisors: John David Dionisio, Ph.D. and Kam Dahlquist, Ph.D.  
Oral Presentation: "GRNsight v2: a web application for visualizing models of small gene regulatory networks"
- March 2017 **Loyola Marymount University Undergraduate Research Symposium (Los Angeles, CA)**  
Research Advisors: John David Dionisio, Ph.D. and Kam Dahlquist, Ph.D.  
Poster Presentation: "Improved data interoperability for GRNsight: a web application for visualizing models of gene regulatory networks"

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## Awards

- May 2018 Outstanding Senior Computer Science Major
- April 2018 LMU Presidential Citation  
Presented to 21 outstanding graduating seniors who have combined excellence in the classroom with effective service and leadership in the University community.
- April 2018 Frank R. Seaver College of Science and Engineering, Mathematics and Science College Scholar
- April 2018 Program Scholar - Computer Science
- April 2018 Program Scholar - University Honors Program
- October 2017 Society of Women Engineers Undergraduate Research Competition Finalist Travel Award
- May 2017 LMU College of Science and Engineering Outstanding Junior Computer Scientist Award
- May 2016 LMU College of Science and Engineering Outstanding Sophomore Engineer Award
- May 2015 LMU College of Science and Engineering Outstanding Freshman Engineer Award
- May 2015 LMU Service and Leadership Award
- 2014 - 2018 LMU Presidential Academic Scholarship  
Four year funding awarded to incoming LMU undergraduates.

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## Teaching Experience

### Loyola Marymount University

- Spring 2017 **Teaching Assistant for CMSI 186 -Programming Laboratory (Java)**  
Instructor: John David Dionisio, Ph.D
- Spring 2016 **Teaching Assistant for ENGR 160 - Algorithms and Applications (MATLAB)**  
Instructor: Nazmul Ula, Ph.D

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## Service and Leadership

### **University of Pennsylvania**

School of Engineering and Applied Science Diversity Committee Member (2018-)

### **Society of Women Engineers**

LMU Section President (2017 - 2018), Region B Collegiate Communications Editor (2017 - 2018), LMU Section Vice President (2016 - 2017), Region B SWE Future Leader (2016 - 2017), LMU Section Outreach Coordinator (2015 - 2016)

### **Alpha Sigma Nu Jesuit Honors Society**

LMU Section Secretary (2017 - 2018)

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## International Experience

Fall 2015 LMU Engineering Study Abroad Program in Bonn, Germany  
Summer 2015 LMU Summer Study Abroad: Christianity and Art in Rome  
January 2015 LMU Alternative Break Social Justice Immersion Program: Haiti