

## Kenneth Lee

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### CONTACT INFORMATION

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<https://kenneth-lee-ch.github.io>

### RESEARCH INTERESTS

Machine learning, high-dimensional statistics, optimization, data mining.

### EDUCATION

#### **Brigham Young University-Hawaii, HI**

B.S. Mathematics, Computer Science

2014 - 2018

- Minors: Information Systems, Information Technology
- Honors Thesis: *An Evaluation of Blind Reconstruction Methods of the Dynamical Structure Functions*
- Advisor: Vasu Chetty
- GPA: 4.0/4.0

### RESEARCH EXPERIENCE

#### **Brigham Young University-Hawaii Institutional Research Group**

Research Analyst Intern

Aug 2018 - Present

- Built pipelines to update Tableau Server workbooks automatically from Quartics surveys.
- Coordinated with the Enterprise Information System department at BYUH to establish a data warehouse to facilitate institutional research.
- Trained and supervised students workers on the data cleaning and visualization with R and Tableau.
- Planned and conducted research to assist with accreditation, university assessment, and President's Council inquiries.

Research Assistant Supervisor

Sept 2017 - Jun 2018

- Built a data dashboard from cleaning course evaluation survey data of the past 5 years in R to visualizing the data via Tableau for the school administration and faculty.
- Evaluated the redundancy of the graduating student survey questions by using factor analysis.
- Led a poster publication titled *"How Meaningful Is Our Graduating Student Survey"* to showcase how to better evaluate survey design.

#### **Brigham Young University IDEA Lab**

Researcher Intern

Jun - Aug 2017

- Research in Systems and Control Theory with applications in a variety of areas including social networks, natural language processing, and biological systems.
- Tasks involve developing code, modeling networks, analyzing simulations, developing theoretical results and writing research papers.
- Advisor: Sean Warnick

### PROJECTS

#### **Predict Patient Inflow at Pali Momi Hospital's Emergency Room**

- Applied machine learning to predict patient inflow at Pali Momi Hospital's Emergency Room (ER).
- Provided recommendations for how to optimize scheduling for their ER's doctors and mid-level providers.
- Duration: Apr-Jun 2018

- Advisor: Cody Baldwin

### Understanding the resting behaviors of Trirectangular Tetrahedral and Triangular Prism Dice Rolls

- Trained a histogram of oriented gradients feature descriptor in Python to count dice rolls more efficiently by object detection.
- Configured a dice rolling machine to automate the process of dice rolling and reduce bias that may come from rolling dice by hands.
- Rewrote codes from MATLAB image processing toolbox to Python using OpenCV, scikit-image and dlib libraries.
- Duration: 2017- Present
- Advisor: Paul Hurst

### PUBLICATIONS

#### Conference Proceedings

V. Chetty, N. Woodbury, J. Brewer, **K. Lee** and S. Warnick, *Applying a Passive Network Reconstruction Technique to Twitter Data in Order to Identify Trend Setters*, IEEE Conference on Control Technology and Applications, Kohala Coast, HI, 2017.

#### Posters

**K. Lee**, K. Pulutu, *Graduating Student Survey Revision: A student effort*, California Association for Institutional Research, Garden Grove, CA, 2018.

K. Pulutu, **K. Lee**, T. Vallabh, Hong Ni M. and R. Ram, *How Meaningful is our Graduating Student Survey?*, Academic Resource Conference, Burlingame, CA, 2018.

### PRESENTATIONS

**K. Lee**, S. Fuluva, *Meet Don, the Autonomous Dice Rolling Machine*, Brigham Young University-Hawaii Undergraduate Research Conference, 2018.

**K. Lee**, *An Evaluation of Blind Reconstruction Methods of the Dynamical Structure Functions*, Senior Research Presentation, Department of Computer Science, Brigham Young University-Hawaii, 2018.

### SELECTED HONORS

#### Brigham Young University-Hawaii

Computer and Information Science Overall Outstanding Graduate	2018
Undergraduate Research Best Oral Presentation Award	2018
Computer Science Alumni Scholarship	2017 - 2018
Mathematics Departmental Scholarship	2014 - 2018
Academic Merit Scholarship	2014 - 2018
University Dean's List	2014 - 2018
Hong Kong Student Association Leadership Certificate	2015 - 2016
BYUH Student Leadership Award	2015

#### Association for Computing Machinery

ACM/UPE Scholarship Award	2017
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#### The National Society of Leadership and Success

Academic Excellence Scholarship	2017
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VOLUNTARY EXPERIENCE	<b>Brigham Young University - Hawaii</b>	
	Hong Kong Student Association President	2015 - 2016
	<ul style="list-style-type: none"> <li>• Increased the membership from 50+ to 100+ in one year.</li> <li>• Led my association to perform on a stage in front of 3000+ audience at an annual event called <i>Culture Night</i> at BYUH.</li> <li>• Organized 30+ small and large events such as <i>speed dating</i>, <i>food festival</i>, career and networking workshop for members.</li> </ul>	
	Hong Kong Student Association Vice President	2014 - 2015
	<ul style="list-style-type: none"> <li>• Created a menu to earn profit \$1000+ from annual <i>food festival</i> event for the association in one night.</li> </ul>	
	<b>The Church Of Jesus Christ of Latter-Day Saints</b>	
	Full-Time Missionary	2012 - 2014
	<ul style="list-style-type: none"> <li>• Appointed to lead and provide training to groups of up to 30 other missionaries.</li> <li>• Gained experience in interpersonal skills with a 70+ hour work week.</li> </ul>	
TEACHING EXPERIENCE	<b>Brigham Young University - Hawaii</b>	
	Computer Science Substitute Instructor	2017
	<ul style="list-style-type: none"> <li>• Taught my 30+ peers two lectures about difference equations.</li> </ul>	
	Math Lab Tutor	2015 - 2016
	<ul style="list-style-type: none"> <li>• Provided tutoring services to classes of Calculus I, Calculus II, Multivariate calculus.</li> </ul>	
PROFESSIONAL AFFILIATIONS	The National Society of Leadership and Success, Member	2017 - Present
	Phi Kappa Phi, Member	2016 - Present
	Association of Computing Machinery, Member	2016 - Present
	Upsilon Pi Epsilon, Member	2016 - Present
PROGRAMMING LANGUAGES	Proficient: Python, R, MATLAB, C#	
	Familiar: C, C++, PHP, Ruby, Java	