

Kenneth Lee

CONTACT INFORMATION

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RESEARCH INTERESTS

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

EDUCATION

Brigham Young University—Hawaii

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

Research Analyst Intern

Aug 2018 - Present

- *Data Visualization*: Built pipelines to update Tableau Server workbooks automatically from Quartics surveys.
- *Database Management*: Coordinated with the Enterprise Information System department at BYUH to establish a data warehouse to facilitate institutional research.
- *Data Cleaning*: Trained and supervised students workers on the data cleaning and visualization with R and Tableau.
- *Consulting*: Planned and conducted research to assist with accreditation, university assessment, and President's Council inquiries.
- Status: Part-Time
- Working hours: 27 hours per week
- Supervisor: Kathy Pulotu

Research Assistant Supervisor

Sept 2017 - Jun 2018

- *Data Visualization*: 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.
- *Statistical Analysis*: Evaluated the redundancy of the graduating student survey questions by using factor analysis.
- *Survey Design*: Led a poster publication titled "*How Meaningful Is Our Graduating Student Survey*" to showcase how to better evaluate survey design.
- Status: Part-Time
- Working hours: 19 hours per week
- Supervisor: Kathy Pulotu

Brigham Young University IDEA Lab

Researcher Intern

Jun - Aug 2017

- *Systems Theory*: Research in Systems and Control Theory with applications in a variety of areas including social networks, natural language processing, and biological systems.

- *Software Engineering*: Tasks involve developing code, modeling networks, analyzing simulations, developing theoretical results and writing research papers.
- Advisor: Sean Warnick
- Status: Full-Time
- Working hours: 40 hours per week

PROJECTS

Predict Patient Inflow at Pali Momi Hospital's Emergency Room

- *Machine Learning*: Applied quantile regression model to predict patient inflow at Pali Momi Hospital's Emergency Room (ER).
- *Consulting*: Provided recommendations for how to optimize scheduling for their ER's doctors and mid-level providers.
- Duration: Apr-Jun 2018
- Number of hours per week of effort: 2
- Advisor: Cody Baldwin

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

- *Computer Vision*: Applied Faster-Recurrent Convolutional Neural Networks (RCNN) in Python to count dice rolls more efficiently by object detection.
- *Robotics*: Configured a dice rolling machine from scratch to automate the process of dice rolling and reduce bias that may come from rolling dice by hand.
- *Software Engineering*: Rewrote codes from MATLAB image processing toolbox to Python using OpenCV, scikit-image and dlib libraries.
- Duration: 2017- Present
- Number of hours per week of effort: 3
- 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. Pulotu, *Graduating Student Survey Revision: A student effort*, California Association for Institutional Research, Garden Grove, CA, 2018.

K. Pulotu, **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
	(Top 1 of the graduating class)	
	Undergraduate Research Best Oral Presentation Award (1 out of 30 peer research teams)	2018
	Computer Science Alumni Scholarship (Nominated by faculty)	2017 - 2018
	Mathematics Departmental Scholarship (Nominated by faculty)	2014 - 2018
	Academic Merit Scholarship (Top 5% of the school)	2014 - 2018
	University Dean's List (Top 5% of the school)	2014 - 2018
	Hong Kong Student Association Leadership Certificate	2015 - 2016
	BYUH Student Leadership Award	2015
	Association for Computing Machinery	
	ACM/UPE Scholarship Award (4 out of all the ACM student members)	2017
	The National Society of Leadership and Success	
	Academic Excellence Scholarship (12 out of all the NSLS inducted members)	2017
VOLUNTARY EXPERIENCE	Brigham Young University—Hawaii	
	Hong Kong Student Association President	2015 - 2016
	<ul style="list-style-type: none"> Increased the membership from 50+ to 100+ in one year. Led my association to perform on a stage in front of 3000+ audience at an annual event called <i>Culture Night</i> at BYUH. Organized 30+ small and large events such as <i>speed dating</i>, <i>food festival</i>, career and networking workshop for members. Status: Part-Time Working hours: 10 hours per week 	
	Hong Kong Student Association Vice President	2014 - 2015
	<ul style="list-style-type: none"> Created a menu to earn profit \$1000+ from annual <i>food festival</i> event for the association in one night. Status: Part-Time Working hours: 10 hours per week 	
	The Church Of Jesus Christ of Latter-Day Saints	
	Missionary	2012 - 2014
	<ul style="list-style-type: none"> Appointed to lead and provide training to groups of up to 30 other missionaries. Gained experience in interpersonal skills by sharing the message of Jesus Christ via means of cold calls, street contacts, and visiting people in their homes. Status: Full-Time Working hours: 112 hours per week 	
	Brigham Young University—Hawaii	
	Computer Science Substitute Instructor	2017
	<ul style="list-style-type: none"> Taught my 30+ peers two lectures about difference equations. 	
	Math Lab Tutor	2015 - 2016
	<ul style="list-style-type: none"> Provided tutoring services to classes of Calculus I, Calculus II, Multivariate calculus. 	

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
CERTIFICATIONS	Machine Learning by Stanford University, Coursera	Mar 2019
	Tableau Desktop Specialist, Tableau Software	Feb 2019
SKILLS	<i>Language:</i> English (Fluent), Cantonese (Native), Mandarin (Fluent) <i>Programming Language:</i> Python, R, MATLAB, SQL, C#, C, C++, PHP, Ruby, Java <i>Framework:</i> OpenCV, Scikit-learn, TensorFlow, Dlib, Pytorch <i>Other:</i> Tableau, AWS EC2, AWS Dynamodb, AWS S3	