Kenneth Lee

Contact Information

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Research Interests

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

Education

Brigham Young University-Hawaii, HI

B.S. Mathematics, Computer Science — 2014 - 2018

- Served as a vice president, then a president of Hong Kong Student Association to plan and organize activities from 2014 to 2016.
- Taught my thirty peers two lectures about difference equations as a substitute instructor.
- 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, Dean's List from 2014 to 2018

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 build databases that can connect to analytical tools used by the institutional research group for real-time data analytics.
- 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 - Aug 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

K. Pulutu, **K. Lee**, *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.

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.

Presentations

Meet Don, the Autonomous Dice Rolling Machine, Department of Mathematics, Brigham Young University-Hawaii. (April 2018)

An Evaluation of Blind Reconstruction Methods of the Dynamical Structure Functions, Department of Computer Science, Brigham Young University-Hawaii. (April 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

Association for Computing Machinery

ACM/UPE Scholarship Award	2017

The National Society of Leadership and Success

Academic Excellence Scholarship	2017

Professional Affiliations	Phi Kappa Phi, Member	2015 - Present
	The National Society of Leadership and Success, Member	2015 - 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