

Vanessa Lin

☎ (925)-487-2398 | ✉ valin@berkeley.edu | 📱 [valin1](#) | 🌐 [valin1](#)

Education

University of California, Berkeley

B.A. Computer Science, B.A. Applied Math || Cumulative GPA: 3.71/4.00 || UPE: CS Honors Society, EECS Honors Program

- Completed Coursework: Data Structures, Machine Structures, Algorithms, Operating Systems, Database Systems, Discrete Mathematics and Probability, Artificial Intelligence, Entrepreneurship, Multivariable Calculus, Linear Algebra
- In-progress Coursework*: Machine Learning

Berkeley, CA

August 2017 - May 2021

Experience

RISELab: Real-time Intelligent Secure Explainable

Undergraduate Researcher | Electrical Engineering and Computer Science Dept

Koopman Theory and Autoencoders

- Exploring stability using linear algebra techniques and recurrent neural networks with postdoctoral fellow, N. Benjamin Erichson and Professor Michael Mahoney
- Building a physically-based variational autoencoder to improve control of non-linear dynamical systems and high dimensional dependent problems

Berkeley, CA

February 2018 - Present

August 2019 - Present

E-mission

- Designed a study that promotes sustainable transportation habits around campus and the city of Berkeley and looks at normative behavioral patterns towards automated suggestions using the E-mission platform under K.Shankari, PhD candidate, Professor David Culler, and Professor Randy Katz
- Recruited a dataset of approximately 15 people to test and share their opinions on the application's usability and design

February 2018 - August 2019

Google

Software Engineering Intern

- PGP Search Ads team

Mountain View, CA

May 2020 - August 2020

Google

Engineering Practicum Intern

- Developed a hotel cancellation feature in which 1M+ users will be able to use for Book on Google, which is a platform that facilitates hotel booking on Google without breaking the search flow, and facilitated the process of a user's cancellation

Cambridge, MA

May 2019 - August 2019

Sandia National Laboratories

Research and Development: Software Developer Intern

Project on Nuclear Gaming

- Developed an interactive data collection web application for the game SIGNAL (<https://pong.berkeley.edu/e-game/>) for proctors to input data collected from board game rounds and facilitate analysis of nuclear deterrence and conflict escalation

Livermore, CA

June 2018 - January 2019

August 2018 - January 2019

Capabilities Development Framework (a Web GIS App)

- Added capabilities to the app for the Department of Homeland Security, using OpenLayers, GeoServer, SQL, JavaScript, and PHP, to incorporate live data-streaming with temperature data

June 2018 - August 2018

Publications

Forecasting Sequential Data using Consistent Koopman Autoencoders

Omri Azencot*, N. Benjamin Erichson*, **Vanessa Lin**, Michael W. Mahoney

Under review for ICML 2020

In this work, we propose a novel Consistent Koopman Autoencoder model which, unlike the majority of existing work, leverages the forward and backward dynamics. Key to our approach is a new analysis that unravels the interplay between consistent dynamics and their associated Koopman operators.

Projects

Parkmark

github.com/valin1/live-scroll-view

- Developed a heat-map based application to provide real-time traffic for places like parking spaces and restaurants using Google Map's API

Hacktech

March 2018

OmniTraffic

github.com/sarahisyoung/Omni-Traffic

- Used OmniSci's Cloud Analytics and deck.gl (WebGL-powered framework) to find times of frequent traffic in various public transportation routes, with Uber Movement Data and visualize data analytics

CalHacks

November 2018

Skills and Qualifications

Languages/Libraries

Python, Java, TensorFlow, HTML/CSS, JavaScript, PHP, Android, AWS, Git, LaTeX, Vim