KARA LIU

(209) 605-3084 | karamarieliu@berkeley.edu

**EDUCATION**

**University of California, Berkeley** 2016 - Present

B.S. in Computer Science and Cognitive Science GPA: 3.97

*Honors*: UC Berkeley EECS Honors Degree Program (2018), UC Berkeley Leadership Award (2016, 2018)

**TECHNICAL SKILLS**

*Computer Languages*: Python, C++, Java, SQL, HTML

*Software & Tools*: PyTorch, TensorFlow, Git, LaTeX, Vim

**EXPERIENCE**

**Berkeley Artificial Intelligence Research (BAIR) Lab** 2018 – Present

*Undergraduate Researcher*

* Focused on integrating machine learning methods with robotics, specifically on long-horizon visual planning and representation learning, under the advising of Pieter Abbeel.

**Hong Kong Advanced Science Technology and Research Institute** 2018

*Research Intern*

* Worked on the Security and Data Sciences team in investigating generative models and their potential impact in the security sector.

**PUBLICATIONS**

**Learning Robotic Manipulation through Visual Planning and Acting** RSS 2019

*A. Wang, T. Kurutach,* ***K. Liu****, A. Tamar, P. Abbeel*

* Proposed a self-supervised, data-driven approach to planning robotic manipulation on deformable objects.
* Used Causal InfoGAN to generate visual plan, and use learned inverse control model to execute actions on PR2.

**Hallucinative Topological Memory for Zero-Shot Visual Planning**

***K. Liu****, T. Kurutach, A. Tamar, P. Abbeel* NeurIPs Deep RL Workshop 2019

* Presented a model-based algorithm for long-horizon visual planning.
* Employed a conditional VAE to visualize potential states, a classifier based on contrastive loss to search for feasibly trajectories, and a low-level controller to execute the plan.

**TEACHING & LEADERSHIP**

**University of California, Berkeley** 2019 - Present

*Undergraduate Student Instructor*, CS 189 - Machine Learning

**Medical Technologies at Berkeley** 2019 - Present

*Machine Learning Co-Instructor*

**Girl Up** 2016 - 2018

*Vice President*

**Alpha Chi Omega** 2018 - 2019

Vice President of Facility Operations