


# Benjamin Eisner

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beneisner 

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## ML Researcher and Software Engineer

focusing on robotic systems that learn to interact with the unstructured world. I have a strong background in machine learning research and engineering, and have helped build systems that are used by hundreds of millions of people around the world..

## Education

2013-2017

### Princeton University

B.S.E. in Computer Science  
w/ High Honors | GPA: 3.52

Relevant Coursework:

*Artificial Intelligence*  
*Distributed Systems*  
*Kernel-Based Learning Methods*  
*Functional Programming*

Activities

*Entrepreneurship Club*  
*Varsity Heavyweight Rowing*  
*Lobster Club Improv Comedy*  
*T8 & Sympoh (Hip Hop Dance)*

Spring 2016

### University College London

Affiliate Student in Computer Science

## Skills

### Programming

Python, Go, Java, C, C++, LaTeX, C#, JS, HTML, CSS, OCaml

### Frameworks/Tools

Pytorch, TensorFlow, Bazel, Jupyter, Git, AWS, Ray, OpenAI Gym, ROS2

### Languages

English, Chinese (Mandarin), Spanish

## Experience

2018-present

### ML Research Engineer

Samsung AI Center - NY. | New York, NY

- Developed novel Deep Reinforcement Learning algorithms for exploration in sparse environments and more stable training, leading to two ML publications.
- Collaborated on projects that fused traditional planning with Deep Learning to learn diverse manipulation behaviors, resulting in one Robotics publication.
- Designed a complete system for robotic manipulation using the Kinova Gen3 arm, as well as low-level drivers for the RealSense camera, a dynamic vision sensor, and Syntouch touch sensors.
- Architected a comprehensive Deep Reinforcement Learning framework for large-scale distributed learning and experimentation.

2017-2018

### Software Engineer - Geo Data

Google Inc. | New York, NY

- Led an organization-wide effort to test how massive data changes affected dozens of Google Maps API services.
- Developed a workflow management system for simulating world-scale launches for Google Maps and Knowledge Graph.
- Consistently managed tens of simultaneous experiments, that processed petabytes of data across thousands of nodes, enabling major org-wide launches.

Winter-Fall 2016

### Research Intern - Machine Learning

Machine Reading Lab, UCL | London, UK

Summer 2016

### Software Engineering Intern - Google Cloud

Google Inc. | Kirkland, WA

Summer 2015

### Software Engineering Intern - Skype for Business

Microsoft Corporation | Redmond, WA

## Publications

- Simmons-Edler, R., **Eisner, B.**, Mitchell, E., Seung, S., & Lee, D. (2019). QXplore: Q-learning Exploration by Maximizing Temporal Difference Error. Accepted to Deep RL Workshop at NeurIPS 2019.
- Tosun, T., Mitchell, E., **Eisner, B.**, Huh, J., Lee, B., Lee, D., ... & Lee, D. (2019). Pixels to Plans: Learning Non-Prehensile Manipulation by Imitating a Planner, IROS 2019.
- Simmons-Edler, R\*, **Eisner, B\***, Mitchell, E., Seung, S., & Lee, D. (2019). Q-Learning for Continuous Actions with Cross-Entropy Guided Policies, RL4RealLife Workshop at ICML 2019.
- **Eisner, B.**, Seung, S.. (2017) Mapping the Brain with Deep Learning. Princeton University Senior Thesis
- **Eisner, B.**, Rocktäschel, T., Augenstein, I., Bošnjak, M., & Riedel, S. (2016). emoji2vec: Learning emoji representations from their description, Best Paper at SocialNLP Workshop at EMNLP 2016