

# Henry Xu

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## Education

### UC Berkeley

Fall 2016–Spring 2020

**B.A.** Computer Science  
GPA 3.978

## Skills

### Programming:

Java	C	Stata
Python	C++	Matlab
Swift	SQL	JS
Go	R	React

### Language:

Native in English  
Fluent in Mandarin

## Coursework

Computer Graphics  
Machine Learning  
Advanced Robotics  
Deep RL  
Computational Photography  
Efficient Algorithms  
Computer Security  
Stochastic Processes  
Linear Algebra  
Econometrics

## Projects

BERT Q&A Demo  
HSML-RL  
Dyna-PEARL  
Transformer Summarization

## Industry Experience

**Federal Reserve Bank of New York** May 2019–August 2019  
*Summer Analyst, Innovation Lab*

- Constructed proof of concept applications showcasing current state of the art natural language processing models to exhibit use cases of machine learning to firm stakeholders
- Examined abstractive approaches to summarization and proposed improvements to current methodologies
- Implemented regression-based extractive summarization after leading an extensive text extraction and cleaning effort

**BlackRock** May 2018–August 2018  
*Summer Analyst, Aladdin Product Group*

- Enhanced database resiliency by designing and implementing a model for predicting and filtering futile database queries at the caching layer
- Improved Apache Spark performance over 10x by optimizing and batching DataFrame API calls
- Applied agile practices to maximize team productivity and meet weekly project deadlines
- Built a NLP-based project management tool built on top of Confluence to enhance cross-team communication

## Research Experience

**UC Berkeley** August 2019–Present  
*Undergraduate Research Assistant, PI: Peng Gao*

- Designed open-domain dialogue systems to build trust and elicit information from malicious agents (PyTorch/Tensorflow)

**UC Berkeley** August 2019–December 2019  
*Advanced Robotics/Deep Reinforcement Learning, Final Projects*

- Adapted Hierarchically Structured Meta-Learning (HSML) for RL environments and assessed the effectiveness of task exploration in the learned skill space (PyTorch)
- Investigated how inverse RL could reduce the reliance of deep learning algorithms on on-policy data (Tensorflow)

**UC Berkeley** August 2018–Present  
*Undergraduate Research Assistant, Mentor: Stefano DellaVigna*

- Explored novel clustering and visualization techniques to model supermarket chain pricing schemes (numpy/sklearn)

**Florida International University** May 2017–August 2017  
*Research Experience for Undergraduates, Mentor: Niki Pissinou*

- Developed and tested models to simulate and detect collusion attacks in social networks
- Solved optimization problems in software-defined networking using graph theory and tested various optimization proposals in ns-3

## Teaching Experience

**UC Berkeley**  
*Undergraduate Student Instructor*

- **Introduction to Economics**
  - Fall 2019
- **Intermediate Macroeconomic Theory**
  - Spring 2019
- **Probability and Mathematical Statistics in Data Science**
  - Fall 2018
  - Fall 2017