LETIAN (MAX) FU

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EDUCATION

University of California, Berkeley *August 2018 - May 2022/2023*[1]
Double Major: Applied Mathematics and Computer Science. GPA: 3.953
Course Highlights: CS282A (Deep Neural Network Architecture), CS288 (Natural Language Processing), CS285 (Deep Reinforcement Learning), EE290 (Theory of Multi-armed Bandits and RL), CS294-190[2] (Advanced Topics in Learning and Decision Making), CS189 (Introduction to Machine Learning), EECS127 (Optimization Models in Engineering), CS170 (Efficient Algorithms and Intractable Problems), EECS C106A[2] (Introduction to Robotics).

PUBLICATIONS

- LEGS: Learning Efficient Grasp Sets for Exploratory Grasping. **Letian Fu**, Michael Danielczuk, Ashwin Balakrishna, Daniel S. Brown, Jeffrey Ichnowski, Eugen Solowjow, Ken Goldberg. *Submitted to 2022 IEEE International Conference on Robotics and Automation*. Philadelphia, PA. May, 2022.
- Mechanical Search on Shelves using a Novel Bluction Tool. Huang Huang, Michael Danielczuk, Chung Min Kim, **Letian Fu**, Zachary Tam, Jeffrey Ichnowski, Anelia Angelova, Brain Ichter, Ken Goldberg. *Submitted to 2022 IEEE International Conference on Robotics and Automation*. Philadelphia, PA. May, 2022.
- High precision localization of pulmonary nodules on chest CT utilizing axial slice number labels. Yeshwant Reddy Chillakuru, Kyle Kranen, Vishnu Doppalapudi, Zhangyuan Xiong, **Letian Fu**, Aarash Heydari, Aditya Sheth, Youngho Seo, Thienkhai Vu, Jae Ho Sohn. *BMC Med Imaging* 21, 66 (2021).

RESEARCH AND WORK

Undergraduate Student Researcher *January 2021 - Present*
Berkeley Artificial Intelligence Research, AUTOLAB

Advised by Prof. Ken Goldberg, Michael Danielczuk, Ashwin Balakrishna, and Huang Huang; currently working on unsupervised skill learning for reinforcement learning and using neural radiance field for robotics grasp synthesis; worked on calibrating general purpose grasping neural network for novel and adversarial objects via multi-armed bandit algorithms; worked on mechanical search in shelf-like environments; works submitted to the International Conference on Robotics and Automation (ICRA 2022).

Video Engineering Intern *June 2020 - September 2020*
Apple

Advised by Daniel Ulbricht and Mohammad Haris Baig; applied computer vision and deep learning to internal development; researched, designed and implemented real-time semantic segmentation algorithms; improved semantic segmentation performance by leveraging geometrical priors; designed new metrics and benchmarked the developed algorithms; developed model evaluation and visualization pipelines; pending submission to ECCV 2022.

Undergraduate Research Apprentice *September 2019 - September 2020*
University of California, San Francisco

Advised by professor Youngho Seo and Jae Ho Sohn, MD, MS to apply computer vision algorithms to clinical data. Develop a toolkit to visualize lung tumor data from LUng Module Analysis (LUNA) and The National Lung Screening Trial (NLST). Search for lung tumors via CenterNet and RetinaNet; work accepted at BMC Med Imaging.

TEACHING

Undergraduate Student Instructor *January 2021 - May 2021*
University of California, Berkeley

Undergraduate Student Instructor (UGSI) for CS 182/282A: Deep Neural Network Architecture (class taught by Prof. Sergey Levine). Hold weekly discussion section and office hours. Work as one of the four Piazza co-leads to respond to students' questions online. Guide students to debug their implementations of neural networks.

SKILLS

Programming languages: Python, Java, C, MATLAB.
Online classes: Convolutional Neural Networks (Coursera *July 2018*), Neural Networks and Deep Learning (Coursera *April 2018*)

[1] Currently applying to the 5-th Year Master Program at UC Berkeley.
[2] Currently taking.