

# Minjune Hwang

✉ mjhwang@stanford.edu

🌐 <https://mj-hwang.github.io>

📍 Stanford, CA 94305

## Education

---

Sep '21 – Jun '23	<b>Stanford University</b> <i>M.S. in Computer Science</i>	
Aug '17 – May '21	<b>University of California, Berkeley</b> <i>B.A. in Computer Science, B.A. in Statistics</i>	GPA: 3.90 / 4.0 (CS GPA: 3.98)

## Work Experience

---

May '21 - Aug '21	<b>Apple, SPG (Autonomous Systems Group) - Trajectory Planning Intern</b> <ul style="list-style-type: none"><li>Developed efficient sampling algorithms for generating kinematically feasible trajectories.</li><li>Implemented abstraction layer for serializing/deserializing data required for trajectory optimization.</li></ul>
Feb '19 - May '21	<b>Berkeley AI Research - ML Researcher</b> <ul style="list-style-type: none"><li>Created vehicle trajectory datasets for training autonomous vehicles with Prof. Alexandre Bayen.<ul style="list-style-type: none"><li>Applied Faster R-CNN for detecting vehicles in traffic and Kalman filter for object tracking.</li><li>Leveraged trajectories for learning under-structured traffic with Model Predictive Control.</li></ul></li><li>Researched extractive text summarization with topic-models &amp; RNNs with Prof. Laurent El Ghaoui.</li></ul>
Aug '19 - Dec '19	<b>Berkeley EECS Department - Undergraduate Researcher</b> <ul style="list-style-type: none"><li>Worked with Prof. David Wagner on identifying adversarial attacks against image classifiers.<ul style="list-style-type: none"><li>Developed a sparsity-invariant version of ResNet to detect adversarial patch attacks by occlusion.</li></ul></li></ul>
Apr '19 - Aug '19	<b>Sumup Analytics - AI Research Intern / Data Scientist</b> <ul style="list-style-type: none"><li>Developed sparse text classifiers and extractive summarizer with sparse Bayesian &amp; topic-models.</li><li>Programmed a novelty detector with sparse optimization for alerting novel articles on arXiv.</li></ul>

## Honors

---

2021	<b>High Distinction (Magna Cum Laude) in General Scholarship, UC Berkeley</b>
2020	<b>Best Workshop Paper Award @ Conference of Applied Cryptography and Network Security 2020</b>
2020	<b>Berkeley Summer Undergraduate Research Fellowships</b>

## Selected Publications

---

2021	1. <b>Hwang, M.</b> , Khanna, S. & Sun, T. ME-MAML!: Multi-Label, Expert-Aided Meta-Learning for Chest X-ray Diagnosis. <i>Stanford University (CS330)</i> (2021).
2020	2. McCoyd, M., Park, W., Chen, S., Shah, N., Roggenkemper, R., <b>Hwang, M.</b> , Liu, J. X. & Wagner, D. Minority Reports Defense: Defending Against Adversarial Patches. <i>Security in Machine Learning and its Applications (SiMLA)</i> (2020).
	3. Tsai, A., Günay, S., <b>Hwang, M.</b> , Li, C., Zhai, P., El Ghaoui, L. & M. Mosalam, K. Text Analytics for Resilience-Enabled Extreme Events Reconnaissance. <i>AI+HADR Workshop @ NeurIPS</i> (2020).
	4. Wu, F., Wang, D., <b>Hwang, M.</b> , Hao, C., Lu, J., Darrell, T. & Bayen, A. Motion Planning in Under-structured Road Environments with Stacked Reservation Grids. <i>Perception, Action, Learning (PAL) @ ICRA</i> (2020).

## Teaching Experience

---

Aug '19 – Dec '19	<b>EECS Department of UC Berkeley - Reader</b> (EE 227BT: Convex Optimization)
Jan '18 – May '18	<b>EECS Department of UC Berkeley - Lab Assistant</b> (CS 61A: Structure and Interpretation of Programs)

## Skills

---

- Programming Languages:** Python, SQL, C++, Java, Javascript, HTML/CSS, R, C, Scheme
- ML:** Vision (segmentation, tracking, etc), Optimization, NLP (RNNs, Transformers), Multitask & Meta Learning
- Robotics:** ROS, RL (DQN, DDPG, SAC, etc), Optimal Control (LQR/LQG, MPC), Inverse RL, Planning (A\*, RRT\*, etc)
  - Libraries: PyTorch, Tensorflow, rospy, PyData Stack (numpy, pandas, sklearn, seaborn, etc), cvxopt