

Minjune Hwang

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Education

Sep '21 – Jun '23	Stanford University <i>M.S. in Computer Science</i>	
Aug '17 – May '21	University of California, Berkeley <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	Apple, SPG (Autonomous Systems Group) - Trajectory Planning Intern <ul style="list-style-type: none">Developed efficient sampling algorithms for generating kinematically feasible trajectories.Implemented abstraction layer for serializing/deserializing data required for trajectory optimization.
Feb '19 - May '21	Berkeley AI Research - ML Researcher <ul style="list-style-type: none">Created vehicle trajectory datasets for training autonomous vehicles with Prof. Alexandre Bayen.<ul style="list-style-type: none">Applied Faster R-CNN for detecting vehicles/pedestrians in traffic and Kalman filter for tracking.Leveraged trajectories for learning under-structured traffic with Model Predictive Control.Researched extractive text summarization with topic-models & RNNs with Prof. Laurent El Ghaoui.
Aug '19 - Dec '19	Berkeley EECS Department - Undergraduate Researcher <ul style="list-style-type: none">Worked with Prof. David Wagner on identifying adversarial attacks against image classifiers.<ul style="list-style-type: none">Developed a sparsity-invariant version of ResNet to detect adversarial patch attacks by occlusion.
Apr '19 - Aug '19	Sumup Analytics - AI Research Intern / Data Scientist <ul style="list-style-type: none">Developed sparse text classifiers and extractive summarizer with sparse Bayesian & topic-models.Programmed a novelty detector with sparse optimization for alerting novel articles on arXiv.

Honors

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

Selected Publications

2021	1. Hwang, M. , 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., Hwang, M. , 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., Hwang, M. , 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., Hwang, M. , 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	EECS Department of UC Berkeley - Reader (EE 227BT: Convex Optimization)
Jan '18 – May '18	EECS Department of UC Berkeley - Lab Assistant (CS 61A: Structure and Interpretation of Programs)

Skills

- Programming Languages:** Python, SQL, C++, Java, Javascript, HTML/CSS, R, C, Scheme
- ML:** Perception/Vision (segmentation, tracking, etc), Optimization, NLP (RNNs, Transformers), Unsupervised Learning
- Robotics:** ROS, RL (DQL, policy optimization, HMM), Optimal Control (LQR/LQG, MPC, Kalman filter)
 - Libraries: Tensorflow, PyTorch, MXNet, PyData Stack (numpy, pandas, sklearn, seaborn, etc), rospy, cvxopt