Examples of good past 221 projects

Project name	Link to project	Content highlight
Auto Mario	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/cqian23/poster.pdf	The authors analyzed how to build AI agent for Auto Mario game. They implemented **three methods**: A*, reinforcement learning, and deep neural networks and compared the performance.
Anomaly Detection for Bridge in Service Using Bidirectional Recurrent Neural Network	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/swjeong3/poster.pdf	This project used real world data to analyze and predict bridge vibration. He **modeled the state and features of this specific application very well**, and trained bidirectional recurrent neural network (which is a complicated network to train).
Multi-Modal Information Extraction for a Question-Answer Framework	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/larsjebe/poster.pdf	Extract information from both text and images. Techniques: CNNs, LSTMs.
An AI for Game Tokkun'99	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/yilong/poster.pdf	Modeling games. Techniques: Q-learning, DQN
Automatically Planning Itineraries Using Business Review Data	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/rafearon/poster.pdf	The students extensively experimented with various implementations of Markov Decision Processes and Constraint Satisfaction Problems on a dataset of Yelp reviews to plan schedules.
Grocery Sales Forecasting for Corporacion Favorita	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/jzhao4/poster.pdf	The students far exceeded the performance of existing implementations for this Kaggle problem by implementing a novel graph structure.
A Survey of Motion Planning for Robotic Arms	https://web.stanford.edu/class/cs221/fall2017/restricted/posters/zhihanj/poster.pdf	A good example of working on something within AI that is not machine learning - the students implemented and compared 3 different motion planning algorithms, which is quite impressive.
Machine Learning for Increasing the	http://web.stanford.edu/class/cs221/fall2017/restri	A great creative ML project; he created his own dataset and applied Deep Learning to

Expressiveness of Auto-generated Music	cted/posters/cgaffney/poster.pdf	making auto-generated music more human like by basically injecting flaws into it. This is the sort of thing you should shoot for if you are thinking of working on a primarily Machine Learning project.

(Link to all previous projects from last Autumn quarter: http://web.stanford.edu/class/cs221/fall2017/project-list.html)