APSC 8280, *Current Topics in Applied Plant Sciences:*
Machine Learning Applied to Plant Science (Spring 2020)

Class		Topic	Demo/Lab
Mar 19	Thurs	Syllabus | Introduction to machine learning | Basic R programming I	Lab 0: laptop setup
Mar 24	Tues	Fundamentals of machine learning | Basic R programming II	Demo 1: end-to-end machine learning
Mar 26	Thurs	Strengths and weaknesses of different machine learning models	Lab 1: Data cleaning and preprocessing
Mar 31	Tues	Machine learning for quantitative genetics in plant breeding	Demo 2: Machine Learning for genomic selection | Lab 1 due
Apr 2	Thurs	Data preprocessing and feature engineering	Lab 2: Feature engineering
Apr 7	Tues	Evaluating machine learning algorithms | Discuss project ideas	Demo 3: Troubleshooting a machine learning pipeline | Lab 2 due
Apr 9	Thurs	Machine learning for plant disease epidemiology	Lab 3: Supervised machine learning
Apr 14	Tues	Machine learning for precision agriculture	Demo 4: Feature engineering | Lab 3 due
Apr 16	Thurs	Introduction to deep learning	Lab 3: Unsupervised machine learning
Apr 21	Tues	Computer vision in agriculture	Demo 5: Convolutional neural networks | Lab 3 due
Apr 23	Thurs	Introduction to reinforcement learning	Final Quiz
Apr 28	Tues	Final project presentations II	
Apr 30	Thurs	Final project presentations II |	Final project report due