## **CS 4320: Machine Learning**

## **Spring 2024 Schedule**

Day	Topic	Reading	Work Due
Jan 9		0	
Jan 11			
W01	Introduction to Machine Learning		
W01	Working with data collections		
W01	Visualizing data		
H Jan. 15	Martin Luther King Jr. Day (no classes)		
Jan 16			<u>Assignment 1</u>
Jan 18			
W02	Regression Models		
W02	Gradient Descent		
Jan 23			Assignment 2
Jan 25			
W03	Data Processing Pipelines		
W03	Intro to Neural Networks		
W03	Perceptrons		
W03	Multilayer Perceptrons		
W03	Back-propogation		
Ion 20			Accient a
Jan 30 Feb 1			<u>Assignment 3</u>
W04	Neural Networks with Tensorflow and Keras		
W04	Classification		
W04	Performance Measures/Confusion Matrix		
W04	Decision Trees		
Feb 6			<u>Assignment 4</u>
Feb 8			
W05	Cross-Validation		
W05 W05	Bias vs Variance		
W05	Error Analysis Loss Functions		
W05	Regularization		
W05	Learning Curves		
Feb 13			<u>Assignment 5</u>
Feb 15			
W06	Hyper-parameter searches		
W06	Support Vector Machines		
H Feb. 19	President's Day (no classes)		
Feb 20			<u>Assignment 6</u>
Feb 22			
W07	Ensembles		
W07	Forests		
W07	Boosting		
W07	Neural Networks for Classification		
Feb 27			Assignment 7
Feb 29			
W08	Action Policies		
W08	Value Iteration		
W08	Markov Chains		

W08	Markov Decision Process	
W08	Q-Values	
W08	Temporal Difference Learning	
Mar 5		<u>Assignment 8</u>
Mar 7		
W09	Temporal Difference Q-Learning	
H Mar 11-15	Spring Break (no classes)	
Mar 19		<u>Assignment 9</u>
Mar 21		
W10	Neural Networks	
W10		
Mar 26		<u>Assignment 10</u>
Mar 28		
W11	Neural Networks	
W11		
Apr 2		<u>Assignemnt 11</u>
Apr 4		
W12	Neural Networks	
W12		
Apr 9		<u>Assignment 12</u>
Apr 11		
W13	Neural Networks	
W13		
Apr 16		<u>Assignment 13</u>
Apr 18		
W14	Neural Networks	
W14		
Apr 23		<u>Assignment 14</u>
W15	Neural Networks	
W15		
Apr 25	Last Day of Classes	
Apr 26	Reading Day (no classes)	
		<u>Assignment 15</u>
Apr 30	Final Exam 9:00 am - 10:50 am	Final Exam

Class announcements may modify schedule from that listed above.