

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|----------------|--|---|--|---|---|
| Wk 1 AM | Orientation | Foundations | AI + Ethics | AI + Medicine | AI + Business + Robots |
| | | <ul style="list-style-type: none"> ➤ Consciousness Theory - On Intelligence w Jeff Hawkins - Hard problem of consciousness Video w David Chalmers - David Chalmers Consciousness paper - Stanford Encyclopedia Consciousness ➤ Intelligence Theory - Intelligence Overview w Deary - On measure of Intelligence - Chollett - A Thousand Brains – Jeff Hawkins ➤ Network Neuroscience Theory - Neuroscience Differences ➤ Exercise: ML w Random Forest - rF Classic approach overview | <ul style="list-style-type: none"> ➤ Ethical Paradigms - Hitchhiker's Overview - Right, Good, Just (Locke, Hume) - Theory Summary ➤ The Alan Turing Institute – AI Ethics - Facebook Social Responsibility - Timnet Gebru, Google - Algorithmic Ethics in ML w Michael Kearns ➤ Bias Fundamentals ➤ Algorithm Bias ➤ Chatbot bias (MIT) ➤ Exercise: Graphing | <ul style="list-style-type: none"> ➤ AI in Medicine ➤ Medicine's Future w AI ➤ Guest Speak Case Study / Guest Speaker: Covid Vaccine Discovery. AI was a key part of COVID vaccine research and research into effective existing drugs or repurposing drugs. One source that many research uses for drug-related datasets is ➤ Exercise: Feature Engineering | <ul style="list-style-type: none"> ➤ Ethical Paradigms - Mechanic Turing ➤ The Business future of AI - Boston Dynamics Dancing Robots ➤ Exercise: Geocodes |
| Wk 1 PM | Frameworks | Foundations | AI + Ethics | AI + Medicine | AI + Surveillance |
| | <ul style="list-style-type: none"> ➤ What is AI and ML Overview? - Basic Concepts - MIT ML Overview - Understanding ML Textbook ➤ Importance Vectors - Personal Vectors - Societal Vectors (IBM) - Existential Impacts (Elon Musk) ➤ MyAnalysis: Frameworks ➤ Exercise: Exploring Data | <ul style="list-style-type: none"> ➤ AI Fundamentals Review - Brookings Institute AI Overview - Hitchhikers AI Guide ➤ Machine Learning Tools - Algorithms - Machine Learning Project Workflow ➤ Manual ML Walkthrough w NASA Helicopter Exercise ➤ MyAnalysis: Confusion Matrix ➤ Exercise: TensorFlow Image Classification Basics with Confusion Matrix | <ul style="list-style-type: none"> ➤ Bias structure ➤ Neural Networks 101 - Neural Net Interactive - Neural Networks Theory - Neural Networks Images ➤ MyAnalysis: Accuracy ➤ Data Set: Image MNIST ➤ Exercise: TensorFlow Image Classification with Convolutions | <ul style="list-style-type: none"> ➤ AI in Medicine - Covid-19 - AI drug discovery - AI Mental Health ➤ MyAnalysis: DrugData ➤ Data Set: Drug datasets ➤ Exercise: Drug Discovery | <ul style="list-style-type: none"> ➤ Surveillance ➤ MyAnalysis: Weekly Recap ➤ Data Set: Facial Data ➤ Exercise: Facial Recognition |