Machine Learning Live Class

Instructors:

Sagar Kandpal:

Sagar Kandpal completed M.Tech. in Computer Integrated Manufacturing from NIT Warangal in 2019. He also worked as a teaching assistant in NIT Warangal. He was also working as a PhD research fellow at IIT Gandhinagar before joining iNeuron as a Data Scientist. His main research is focused on the Application of Machine Learning and Deep Learning algorithms to real-world use cases. Research Interests: Mathematical Modelling and Optimization, Deep Reinforcement Learning, Geometric Deep Learning, Robotics and Computer Vision.

Curriculum:

Machine Learning Module 1

• Introduction machine learning module 1

• Supervised, unsupervised, semi-supervised, reinforcement

• Train, test, validation split

• Performance

• Overfitting, underfitting

• OLS

• Linear regression

• polynomial regression

• Assumptions R-square adjusted, R-square intro to Scikit-learn, training methodology, hands-on linear regression, ridge regression, logistics regression, precision-recall

Machine Learning Module 2

• Decision tree, decision tree regressor, cross-validation

• Bias vs variance, ensemble approach, Bagging, boosting

• Randon forest, stacking, variable importance

• XGBoost, hands-on XGBoost, gradient boost, ada boost

Machine Learning Module 3

• K Nearest Neighbour, k-NN regressor, lazy learners, the curse of dimensionality, k-NN issues

Machine Learning Module 4

• K-means, hierarchical clustering, DBSCAN

• Performance measurement, principal component analysis, dimensionality reduction

Machine Learning Module 5

• Naive Bayes SVM

• Anamoly detection

Time series

• Arima, Sarima, Auto Arima

• Time series using RNN LSTM, prediction of NIFTY stock price