



EAST WEST UNIVERSITY

Department of Computer Science and Engineering

Assignment - 02, Summer 2024 Semester

Course: Machine Learning, CSE475/ ICE478, Section - 2
Instructor: Dr. Raihan Ul Islam, Associate Professor, Department of CSE
Full Marks: 15
Time: 15th September, 24

Notes:

- C2: Understand, use, and determine appropriate machine learning methods/algorithms suitable for different types of learning problems, i.e. know about their most important weaknesses and advantages.
 - There are 3 (Three) questions, answer them. Mark of each question are mentioned at the right margin.
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1. Explain the concept of bootstrapping and bagging in the context of Random Forests. How do these techniques contribute to the robustness and performance of the model? [C2 Marks: 5]
2. Discuss the key advantages of Random Forests over single decision trees. Focus on their ability to address overfitting and improve generalization. [C2 Marks: 5]
3. The slides mention that Random Forests are "immune to the curse of dimensionality." Explain this statement in detail. Discuss how the random selection of features at each node helps mitigate the challenges associated with high-dimensional data. [C2 Marks: 5]