Conferencia invitada

OPEN SET RECOGNITION AND ACTIVE LEARNING USING TRANSDUCTION

por

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Resumen

We introduce transduction and discuss its application to open set (face) recognition and active learning. Open set (face) recognition operates under the assumption that not all the test (unknown) probes have mates in the gallery (training set). Open set face recognition either detects the presence of some biometric signature within the gallery and finds its identity or rejects it, i.e., it provides for the "none of the above" answer. Open Set TCM – kNN, driven by the relation between transduction and Kolmogorov complexity, provides a local estimation of the likelihood ratio used for detection tasks together with modeling mechanisms needed for personal identification for whom training and testing play complementary roles. PSEI (pattern specific error inhomogeneities) error analysis to identify and handle difficult to recognize (face) patterns is discussed.

Active learning makes incremental choices about what is best to learn. We describe a novel method for active learning using transduction. The data points are chosen to be labeled and join the training set according to their p-values, which are determined using the corresponding Lagrange multipliers provided by the Support Vector Machine (SVM). The setting considered is stream-based where data points are observed in sequence.

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Hora: 17.00 horas
Lugar: Sala 4.3.A.05
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