B. Notations

U	A non-empty finite set of objects (the universe of discourse)
A	A non-empty finite set of attributes or variables
$\Re$	The set of real numbers
$\tilde{A}$	A type-2 fuzzy set
$\mu(A)$	Fuzzy measure of fuzzy set A
$FOU(\widetilde{A})$	Footprint Of Uncertainty (FOU) of a type-2 fuzzy set
$\underline{\mu}_{\tilde{A}}(x)$	The Lower Membership Function (LMF) of a type-2 fuzzy set
$\bar{\mu}_{\tilde{A}}(x)$	The Upper Membership Function (UMF) of a type-2 fuzzy set
n	Total number of input samples
k	Number of nearest neighbour
x	A feature vector
θ	Threshold