KUSHAL KANTI GHOSH

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EDUCATION

B.E. in Computer Science and Engineering 2016-2020(Exp)
Jadavpur University, Kolkata : CGPA: 9/10

Higher Secondary - Balurghat High School, D/Dinajpur (WBCHSE): 94.6% (2016)

Secondary - Balurghat High School, D/Dinajpur(WBBSE): 94.4% (2014)

INTERNSHIP EXPERIENCE

Summer Research Intern, IIT Kharagpur
Guided by Prof. Pralay Mitra, Dept of CSE, IIT Kharagpur (May, 2018-June, 2018)
Worked on Identifying InDels in Loop Regions of Protein Structures. Parsed PDB files using **C++**. Used Blast to generate protein database and search indels of proteins and used Stride to get secondary structures of proteins. Used Pymol for visualizing protein structures.

PUBLICATION

● M Ghosh, S Adhikary, **K K Ghosh**, A Sardar, S Begum, R Sarkar, "Genetic algorithm based cancerous gene identification from microarray data using ensemble of filter methods", Medical & Biological Engineering & Computing.

● S. Ghosh, **K. K. Ghosh**, S. Chakraborty, S. Bhowmik, R. Sarkar, "A filter ensemble feature selection method for handwritten numeral recognition", International Conference on Emerging Technologies for Sustainable Development (ICETSD '19), pp. 394-398, March 5-6, 2019, Kolkata, India.

RESEARCH EXPERIENCE

● Have done research work on Cancerous Gene Identification from Microarray data using ensemble of filter methods and genetic algorithm, under Prof. Ram Sarkar, Jadavpur University. Implemented ten filter methods and proposed an ensemble of different types of filters to apply the result to genetic algorithm (wrapper) for feature selection. The proposed ensemble resulted in >=95% accuracy with ~5 features.

● Worked on Protein Classification under Prof. Ram Sarkar, Jadavpur University. Have done classification by combining three classifiers- Randomforest, kNN and MLP using scikit-learn. Used five classifier combination methods and accuracy has been increased by 5-10% in compared to the state of the art.

● Worked on LBP based text-nontext seperation using coalition game theory based feature selection. Accuracy has been improved by ~2% in compared to the original feature vector. Applied the concepts of dynamic programming and combinatorics to reduce computational complexity.

PROJECTS

● Created a compiler for a subset of C programming language. Coded from scratch, various features like lexical analysis, syntax tree creation and parsing. Implemented structs, pointers and many other common features of C.

● Implemented RandomForest classifier from scratch using C++ for bi-class problem. Implemented mutual information, gain ratio, decision tree and many other things related to this.

● Implemented Naive Bayes classifier from scratch using C++.

LANGUAGES

C++, C, Python

TOOLS

Weka, MATLAB 2017, GNU Octave, Git, Bash, Lex/Yacc