Mr. Girik Malik, a second year student of B.Tech. Computer Science and Engineering has won the “Second Best Poster Award” for a poster titled “Big Data Storage Solutions: Data to DNA” The award was presented by Prof. S. Ramachandran, Scientist, CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi, at the national conference on Big Data Mining held in Chandigarh during 27-29 November 2014.

Girik has been working on the problem of converting “computer data into DNA sequence” with Dr. Pawan K. Dhar, Professor, Department of Life Sciences, School of Natural Sciences. They have been trying to develop an alternate method of storing big physical data in some other form and invented a novel method by developing a tool called ‘nibble’ - meaning ‘half-a-byte’. Nibble is the state-of-the-art platform that converts computer data into DNA sequence and back via the ASCII table.

Talking about the benefits of using nibble, Dr. Dhar says, “One of the key advantages is the use of “existing genome sequence”, in contrast to synthesizing novel DNA sequences that current approaches use. Furthermore, only one strand of DNA needs to be used for storing the computer data. The data storage can be robust and effective for repeated storage and readouts. The data
are completely encrypted and secure. The physical DNA sequence in combination with the nibble platform can be used for the long-term storage and retrieval of computer data. Our strategy can also serve as foundation for generating, storing and retrieving passwords.”