1154-05-2031 **Fatmanur Gursoy** (fnurgursoy@gmail.com), Istanbul, Turkey, and **Elif Segah Oztas*** (esoztas@kmu.edu.tr), Karamanoglu Mehmetbey University, Science Faculty, Department of Mathematics, Karaman, Turkey. *Cosine distance on lifted polynomials.*

New studies of different areas have focused on artificial intelligence in new trend. One of these areas is algebraic coding theory. It is well known that a linear code over F_q with minimum Hamming distance 3, can correct 1 error. A question is "can this code correct more than 1 error by changing decoding algorithm?". One of the tools to measure distance in artificial intelligence systems (e.g. word2vec) is cosine distance. According to the question, we study on cosine distance on lifted polynomials that a special type of polynomials to generate optimal codes over F_q. We present a method to find the best angle to correct more error for optimal codes obtained by lifted polynomials. (Received September 17, 2019)