SBGC-LSTM io gather dynamic data En. Eurygasieri's location in the D-dimensional scarching space denoted wih the by the cxpression optinization, solution The fommula for Eurygaster >peed Each Eurygaster moves a (51,52, dhflcrent speed as they approach the cxlreme global value. Furthermore.S, = (s,1, 5,2,.... C TEMPORAL HIERARCHICAL ARCHITECTURE Pollowing LSTM layers, SBGC-LSTM layers receive scnes where AT E of augmented node features Rvd,. Three SBGC-LSTM layers are slacked in the pro-posed moxdcl to learn the temporal dynamics and spatial arrangement We creaie a Icmporal hicrarchical design of SBGC-LSTM with average pools in icmporal domains and inspired by spatial pooling o CNNS. Due lemporal hierarchical architecture, input temporal receptive ficlds of top SBGC-LSTM layers become short-term fasteners and are more sensitive to lcmporal dynamics. Morcover. they drastically reduce computing costs while cnhancing periomances [27). Particlc swarm optimization (PSO) and foraging icchniques are used in EOA optimizations, which are modelled afier curygasters: Based on the obseration that curygasters use their anicnnae to scan their sumoundings, this is truc. These parameters are initially set to high values, which decrease progressively: as a result, one trics to atlain a wide region helore reducing to obiain a capacity that is reasonable ior Eurygasicr. The mark for the correctly dctecied position is qn. whereas the lefi detccicd position is denoicd by qk. These places include food flavor, which is represented by the fitness function values /(qn) and /(qn), which were compuled using the recommended method. The EOA aligorithm's location and speed updating procedure is as follows: atlats 820 where in Eq (14), (A/), is the expansion characteristic of combination i at time t. The main point here is that the lincar portion and LSTM are distributed among several characteristics. LEARNING SBGC-LSTM AE the cnd, the GF and of time stamp ane convert as resulis of and (owr); for CI phunses, where (ou), (ou), .(ox)a.....Thcrefore, to remove the scale viriation between the two [eatures, an LSTM layer was applied: EM =fomlconcara, Va) = fmlconcarn -fi-1) (14) the decaying weight coefficients.