

(54) Title of the invention : LEARNING MULTIPLE FACTORS-AWARE DIFFUSION MODELS IN SOCIAL NETWORKS

(51) International classification :G06Q0050000000, H02J0007000000, G06F0030230000, G06Q0010040000, G06F0009540000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

(71)Name of Applicant :  
**1)Mr.Konathala Lokesh**  
 Address of Applicant :Assistant Professor, Department of CSE-CS, Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda -----

**2)Malla Reddy Engineering College**  
 Name of Applicant : NA  
 Address of Applicant : NA

(72)Name of Inventor :  
**1)Mr.Konathala Lokesh**  
 Address of Applicant :Assistant Professor, Department of CSE-CS, Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Medchal-Malkajgiri-500100. Maisammaguda -----

**2)Dr.P.Srinivas**  
 Address of Applicant :Associate Professor, Department of CSE-CS , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**3)Dr.K.Vasanth Kumar**  
 Address of Applicant :Professor, Department of CSE-IoT, Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**4)Mr. P.V. Ramanaih**  
 Address of Applicant :Assistant Professor, Department of CSE-CS , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**5)Mr.M. Krishna Kanth**  
 Address of Applicant :Assistant professor, Department of CSE-CS , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**6)Ms.P.Sumanya**  
 Address of Applicant :Assistant Professor, Department of CSE-CS , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**7)Ms.K.Suma**  
 Address of Applicant :Assistant Professor, Department of CSE-CS, Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**8)Mr.G.Ganesh**  
 Address of Applicant :Assistant Professor, Department of CSE-CS , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

**9)Ms.K.Sowjanya Naidu**  
 Address of Applicant :Assistant Professor, Department of CSE-IOT , Malla Reddy Engineering College( Autonomous), Maisammaguda (Post. Via. Kompally), Mechal-Malkajgiri-500100. Maisammaguda -----

(57) Abstract :  
 Information diffusion is a natural phenomenon occurring in social networks. The adoption behavior of a node toward an information piece in a social network can be affected by different factors, e.g. freshness and hotness. Previously, many diffusion models are proposed to consider one or several fixed factors. In fact, the factors affecting adoption decision of a node are different from one to another and may not be seen before. For a different scenario of diffusion with new factors, previous diffusion models may not model the diffusion well, or are not applicable at all. Moreover, uncertainty of information exposure intrinsically exists between two connected nodes, which causes modeling diffusion more challenge in social networks. In this work, our aim is to design a diffusion model in which factors considered are flexible to be extended and changed and the uncertainty of information exposure is explicitly tackled. Therefore, with different factors, our diffusion model can be adapted to more scenarios of diffusion without requiring the modification of the learning framework. We conduct comprehensive experiments to show that our diffusion model is effective on two important tasks of information diffusion, namely activation prediction and spread estimation

No. of Pages : 6 No. of Claims : 1