

Design and Development of News Droid App for Android

Naveen Ghorpade^{1*}
Nalluri Bhargavi¹
Peta Hima Sai¹
Potluri Tarun¹
Pilla Sai Charan Reddy^{1/1}

School of Computer Science and Engineering
REVA University
Bengaluru
India-562149
[naveen.ghorpade@gmail.com*](mailto:naveen.ghorpade@gmail.com)

Abstract— We already have rapid connectivity and systems which enable everyone to wirelessly sync with each other as the globe's tech advances. Cell devices, iPad, and computers are becoming more popular every day, and the majority of the population currently own them. We need to keep up with every incident and news in this fast-paced, information-driven environment. We look for news on a daily basis since it is crucial information. Highlights, match reports, public announcements, advertisements, and price variation reports relating to business/assets are all examples of news. Various news outlets in India and throughout the world broadcast live news every minute. This article focuses on the creation of a News app, which is an Android smartphone application that provides users with the most up-to-date news from over 120 newspapers in over 50 countries. The primary purpose of this app is to connect media articles from across the world and deliver them to users as swiftly as possible in the finest visual manner available.

Keywords—News app, Flutter, Android, Studio, Firebase

1. INTRODUCTION

Public News Droid is an advanced and informative system that allows users to keep up with the latest news, articles, and other relevant events in their area. This system allows the general people to stay informed about what is going on in their area, locality, or city^[1-4]. This system requires two applications to function: one for the administrator and one for the user. The user can only see news from his own city, but he or she can add news from any city. If any abusive, irrelevant, or fake news is added by any users, the administrator will monitor it and take appropriate action^[5-6].

Flutter is used for the front end, and Firebase issued for the backend. To use this app, the user must first register with the system and then update his information. The most recent news is displayed first, and so on. The user can also refresh the news, which will display the most recent news first and close the current news^[7-12]. A picture and a title connected to the news can be added by the user. The system allows a swipe to advance to the next or previous news with transition effects, making reading the news lively and fantastic^[13-22].

There are several sections to this application. It begins with a literature review, then move on to a discussion of the technique utilized, then a description of the analysis or pre- questionnaire, design and development, and finally system evaluation. The application closes with a summary of the research effort, as well as its shortcomings and potential improvements^[23-35].

2. OBJECTIVES

The objectives of this work is twofold, i.e.,

- A. The main goal of this project is to create an Android-based news app using open-source technologies, as well as to integrate backend and server-side programming with the android app.
- B. Create an app where users can register, see news, and post news to the community on their own, so that everyone can keep up with what's going on.

3. METHODOLGY

In this step, everything that could jeopardize the venture or a portion of it is screened; in other words, the hypothesis is tested through use to ensure that the information in the framework alters in accordance with the arrangement. The project manager connects all of the equipment and stages involved with the express objective of monitoring and extending plans and keeping oneself in control. The following are the steps for using each of the devices: Carry out the activities as planned. All effort, changes, and outcomes should be documented and reported. Analyze the impact of the activity or adjustments done in accordance with the plan^[36-40].

Public News is an advanced and informative system that helps clients keep up with the latest news, articles, and other

interesting events in their area. This system allows people in the immediate vicinity to stay informed about what is going on in their region, area, or city. This framework requires two programs to function: one for the administrator and one for the user. The client is only allowed to access news from his own city, but he or she is free to add news from any place. If any mishandling, unimportant, or fraudulent news is included by any clients, the administrator will investigate and take appropriate action [41-46].

Android Studio was used for the front end, and SQL Server for the backend [7-12]. To use this application, the client must first register with the framework, after which he can update his points of interest. The most recent news is displayed first, and so on. The client can also re-energize the news by selecting the most recent one displayed first, and the current news will be closed. A photo and a title associated with the news might be included by the client. The client can address the news in more than 450 words. The look and feel of reading the news is energizing and amazing, as the framework allows you to swipe to the next or previous news with change effect

A. Features of this design

- There is no cost associated with the development of this work.
- This work makes use of open-source tools.
- The backend is a pay-as-you-go option, with a free plan available up to a specific limit.

B. Design and Development

We presently have features such as corporate stream, social stream, and blog stream in this app. Each stream is significant in its own right. Corporate news, such as news on MNCs, startups, and so on, is brought to you by Corporate Stream.

The social stream provides updates on social media sites such as Meta, Instagram, and others. The blog stream, on the other hand, contains information about AI, Covid 19, and other topics in the form of blogs.

Flutter is used to create the frontend design and development. Google created the Flutter framework. Firebase is the backend used. Backend as a service platform Firebase allows you to manage your backend without writing a single line of code. Firebase provides a number of features, including Firebase Auth, Firebase Database, Firebase Realtime Database, Firebase Storage, and Firebase Cloud Messaging [13].

We are using Flutter which is integrated with Android Studio. The Flutter Fire dependencies used in the project. It's a Software Development Kit that makes it simple to connect to Firebase.

The app looks for a Firebase Auth Token in the splash screen and tries to refresh it if it exists. If the Firebase Auth Token expires, the app will redirect you to the sign-in screen.

If the user already has a database account. He or she can sign in using their username and password, and then be taken to the main page after verification.

If the user does not have an account, he must establish one with a username and password. The user's account will be established after giving a username and password. The user will be able to access the homepage, where he will be able to switch between corporate, social, and blog streams.

All of these streams are linked to the database in the backend. When news is updated on the server, it is updated in real time in the application.

A list with a news thumbnail, title, and description is formed. It is used across all tabs. When the apps plus button is pressed. By giving an image thumbnail, title, and description, the user will be able to produce news. The image will initially be saved in Firebase storage. We will be able to obtain a download URL once the image has been successfully uploaded, and the URL, as well as the image title and description, will be saved in the firebase fire store under the chosen category.

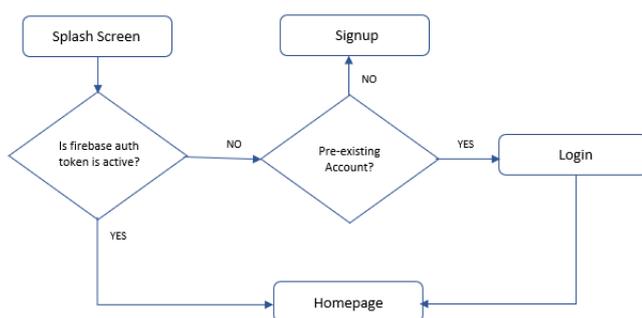


Fig.1. Block Diagram of Layout

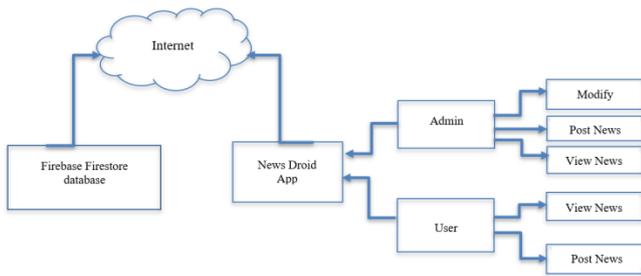


Fig.2. Flow diagram of the entire work

4. RESULTS

The Fig.3 to Fig.7 shows the results of this work.

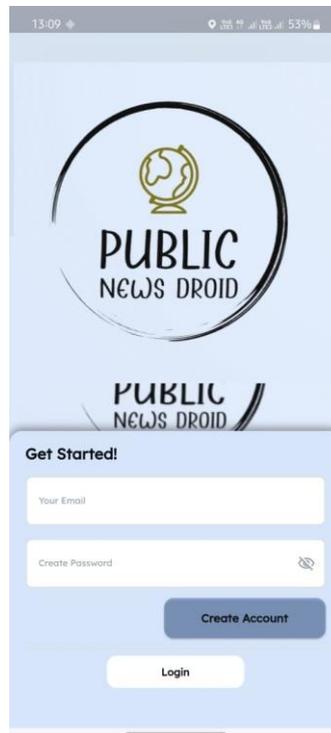


Fig.3. Login/Signup Page

The Fig.3 shows the login/signup page of the application where the user can enter their email and password to either login or to sign up on the application. When the user signs up, a new user credential is created in the remote authentication server which stores the user entered details for later validation. When the user logs in, the entered credentials are validated over the existing credentials in the authentication server and the user will be allowed to login when the authentication is successful.

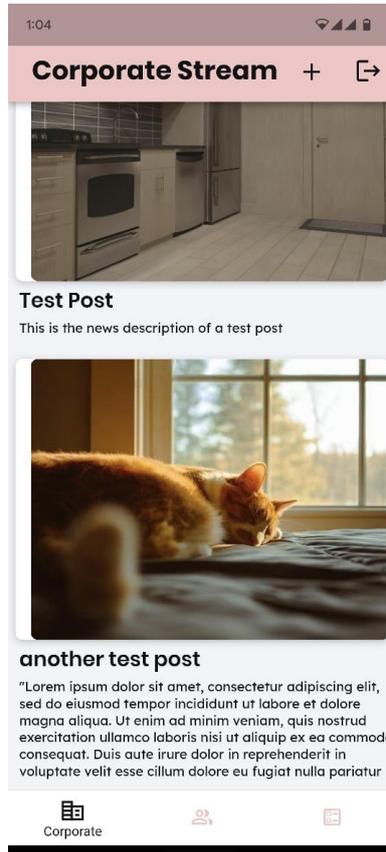


Fig.4. Corporate Feed Page

The Fig.4 shows the homepage the user is redirected to after logging in, this picture highlights the corporate news which has all the news articles from around the user in the field of social. The user can scroll through the articles and get insights about the incidents happening.

The Fig.5 above shows the homepage the user is redirected to after logging in, this picture highlights the social news which has all the news articles from around the user in the field of corporate. The user can scroll through the articles and get insights about the incidents happening.

The Fig.6 shows the homepage the user is redirected to after logging in, this picture highlights the blog posts which have all the blogs uploaded. The user can scroll through the articles and get insights about the incidents happening.



Fig.5. Social Feed Page

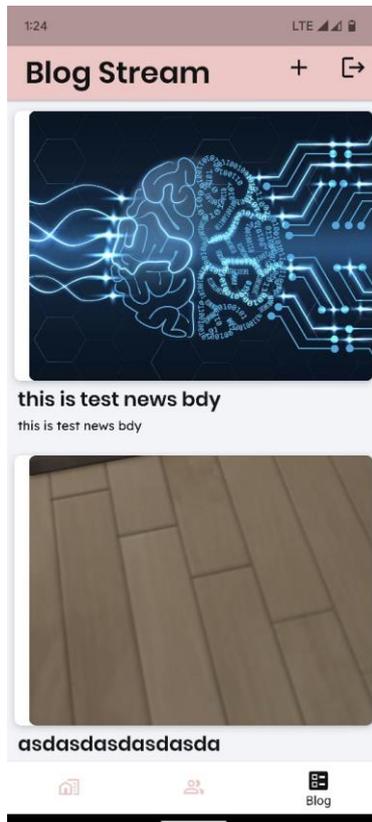


Fig.6. Blog Feed Page

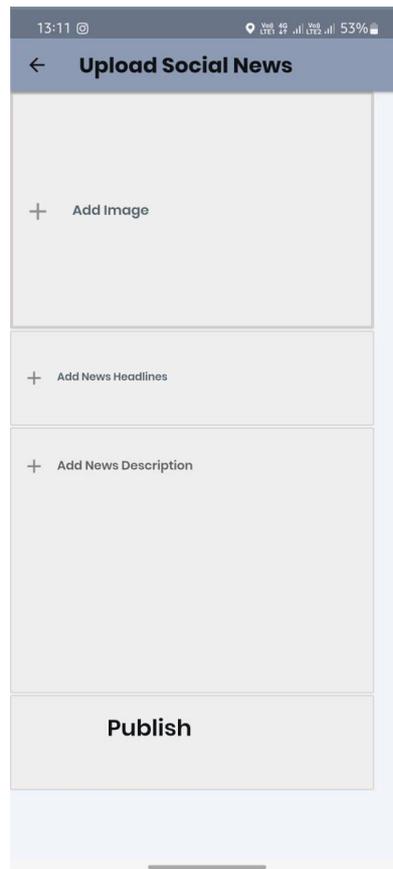


Fig.7. Add Post Page

The Fig.8 above shows the add post page which is different for all the 3 genres. The user on this page can upload images related to the news article they want to share, give headlines to the news and also write a description to the article to give more information about the post. Once the user clicks on share, the article will be updated to the feed of all other users on the app where they can access the news articles.

5. CONCLUSION

With the growing population, there is much that the news channels are unaware of, either intentionally or unintentionally, and in order for this information to reach us, we need a medium that allows citizens to speak out about what is going on in their communities, and this information should be available for all of us to view and share.

The android application is designed to reduce the distance between people. In our project, we create a news app that specifies news according to their categories i.e. sport, technology, politics, studies, etc. This news app is able to keep totally updated news for their users. A specific notification for some important news is generated even though the app is not opened. Thus, our android app can be implemented as a smarter solution.

6. REFERENCES

- [1] Mozhgan Tavakolifard, Jon Atle Gulla, Kevin C. Almeroth, Jon Espen Ingvaldesn, Gaute Nygreen, Erik Berg, May 2013, The Paper Janus: How exceptionalism based on regaining influence and doing new media help a Chinese mobile news app negotiate censorship for better journalism
- [2] Mike Ananny & Kate Crawford; Jun 2014; A Liminal Press, Situating news app designers within a field of networked news production
- [3] Marios Constantinides, John Dowell, David Johnson, Sylvain Malacria; August 2015; Exploring mobile news reading interactions for news app personalisation
- [4] Saka, A. M.; Osunade, O; 2016; ANDROID NEWS AND EVENT MOBILE APP FOR THE UNIVERSITY OF IBADAN COMMUNITY.
- [5] Adlibris bokhandel, <http://www.adlibris.com>, retrieved December 18, 2010.
- [6] Amazon, <http://www.amazon.com>, retrieved January 5 and 24, 2010.
- [7] Android, Androidology-Part 2 of 3- Application Lifecycle, <http://developer>.

- [8] android.com/videos/index.html#v=fL6gSd4ugSI, retrieved May 4, 2010.
- [9] Android, Platform versions, [http:// developer.android.com/resources/dashboard/platform- versions.html](http://developer.android.com/resources/dashboard/platform-versions.html), retrieved April 30, 2010.
- [10] What is Android? <http://developer.android.com/guide/basics/wh at-is-android.html> <http://developer.android.com/guide/basics/wh at-is-android.html>, retrieved March 4, 2010
- [11] [http://developer.android.com/guide/basi cs/what-is-android.html](http://developer.android.com/guide/basics/wh at-is-android.html) .
- [12] <http://venturebeat.com/2009/01/01/android-netbooks-on-their-way-likely-by-2010>
- [13] Weblancer.net.[Online].Available:<https://www.weblancer.net/jobs/mobilynye-prilozheniya-28/node-js/?page=3> . [Accessed: 02-May-2022].
- [14] Ajay Sudhir Bale, Suhaas V. Reddy, Shivashankar A. Huddar, Electromechanical characterization of Nitinol based RF MEMS switch, *Materials Today: Proceedings*, Volume 27, Part 1, 2020, Pages 443- 445, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2019.11.263>
- [15] Ajay Sudhir Bale, J. Aditya Khatokar, Shantanu Singh, G. Bharath, M.S. Kiran Mohan, Suhaas V. Reddy, T.Y. Satheesha, Shivashankar A. Huddar, Nanosciences fostering cross domain engineering applications, *Materials Today: Proceedings*, 2020, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.09.076>.
- [16] J. Aditya Khatokar, N. Vinay, Ajay Sudhir Bale, M.A. Nayana, R. Harini, V. Suhaas Reddy, N. Soundarya, T.Y. Satheesha, A. Shivashankar Huddar, A study on improved methods in Micro- electromechanical systems technology, *Materials Today: Proceedings*, 2020, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.10.993>.
- [17] S. A. Huddar, B. G. Sheeparamatti and A. S. Bale, "Study of pull-in voltage of a perforated SMA based MEMS Switch," 2017 International conference on Microelectronic Devices, Circuits and Systems (ICMDCS), Vellore, India, 2017, pp. 1-4, doi: 10.1109/ICMDCS.2017.8211584.
- [18] Ajay Sudhir Bale et al 2020 IOP Conf. Ser.: Mater. Sci. Eng. 872 012008
- [19] Venkatesh M S, Manoj Patil, Ajay Sudhir Bale, Srujan Ingalgeri. Design of Remotely Monitorable Low Power Phototherapy Unit for Treatment of Neonatal Hyperbilirubinemia, National Conference at Bapuji Engineering College, Davangere, India
- [20] Aditya Khatokar J., Mounisha M., Nayana M.A., Ajay Sudhir Bale, Bhavana S. Battery Management System: A Survey. *Journal of Industrial Safety Engineering*. 2020; 7(1): 29–35p.
- [21] Kishan Das Menon H, Aditya Khatokar J, Ajay Sudhir Bale. Enhanced Railway Operations Using Automated Locomotive Simulator. *Trends in Transport Engineering and Applications*. 2020; 7(1): 17–23p.
- [22] Ajay Sudhir Bale, Hosamani Ummer Farooq N, Shivashankar Huddar. Automated Diesel transfer system using PLC. *Journal of Industrial Safety Engineering*. 2019; 6(1): 8–14p.
- [23] Aditya Khatokar J, Nayana M A , Soundarya N, Meghana N, Bhavana S, Sunkireddy Umarani, Ajay Sudhir Bale. Electric Vehicles: Transition to Green Zone. *Trends in Transport Engineering and Applications*. 2020; 7(2): 12–17p.
- [24] Raksha K.P., Rajani Alagawadi, Nisha N., Deeksha R., Ajay Sudhir Bale. Advancement of Nanotechnology in Batteries. *International Journal of Energetic Materials*. 2020; 6(2): 18–24p.
- [25] Vinay N., Aditya Khatokar J., Ajay Sudhir Bale. Analysis on Synthesis of Quantum Dots with Their Applications on Photochemistry. *International Journal of Photochemistry*. 2020; 6(1): 1–11p
- [26] Ajay Sudhir Bale, Bharath G, Kiran Mohan M S, Shantanu Singh, Aditya Khatokar J. Thin-Films: Study of Medical, Display and Environmental Applications. *International Journal of Energetic Materials*. 2020; 6(1): 1–6p.
- [27] Aditya Khatokar J., Nayana M.A., Ajay Sudhir Bale, Meghana N., Sunkireddy Umarani. A Survey on High Frequency Radios and their Applications. *Journal of Industrial Safety Engineering*. 2020; 7(1): 7– 12p.
- [28] Harish Koujalgi, Ajay Sudhir Bale. Biometric Based Automatic Ticket Vending Machine for Indian Railways. *International Research Journal of Engineering and Technology (IRJET)*. Volume: 04 Issue: 07 July - 2017. e-ISSN: 2395-0056, p-ISSN: 2395-0072.
- [29] Naveen Chandra Gowda, Sunil Kumar, Subham Majumdar, Koneti Naga Abhishek, Parikshit Sarode, "Android Application on Plant Disease Identification using Tensorflow", *International Journal of Engineering and Advanced Technology (IJEAT)*, Volume-8, Issue-5S, pp-112-115, May 2019.
- [30] Rajput, Dharmendra Singh, and Syed Thouheed Ahmed. "Evaluating the Performance of Delay Tolerant in Network Routing Protocols." *International Journal of Computational Learning & Intelligence* 1, no. 1 (2022).
- [31] A. S. Bale, S. Saravana Kumar, P. Rao and A. K. J., "A Recent Trend in DC Microgrid," 2021 International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), 2021, pp. 543-546, doi: 10.1109/ICACITE51222.2021.9404668..
- [32] Aditya Khatokar J, Nayana M A, Kishan Das Menon H, Janardhan V, Ajay Sudhir Bale. A Study on Various Approaches in Remote Sensing. *Journal of Telecommunication, Switching Systems and Networks*. 2020; 7(2): 32–37p.
- [33] Ajay Sudhir Bale, J. Aditya Khatokar, M.S. Kiran Mohan, G. Bharath, Shantanu Singh, J. Roshini, Suhaas V. Reddy, Shivashankar A. Huddar, N. Vinay, Nanotechnology as a tool for treating cancerous tumors, *Materials Today: Proceedings*, 2021, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.12.1175>.
- [34] S. Joy, R. Baby Chithra, A. S. Bale, N. Ghorpade, S. N. Varsha and A. S. Naidu, "A Comparative Study on Recent Trends in Iris Recognition Techniques," 2022 International Conference on Electronics and Renewable Systems (ICEARS), 2022, pp. 1521-1525, doi: 10.1109/ICEARS53579.2022.9752355.

- [35] B. C. R, S. Joy, A. S. Bale, A. S. Naidu, V. N and V. S N, "Advanced Computing in IoT for Door Lock Automation," 2022 International Conference on Electronics and Renewable Systems (ICEARS), 2022, pp. 565-569, doi: 10.1109/ICEARS53579.2022.9752140.
- [36] Venugopal, Srilakshmi, Praveen Purohit, Tarun, Sudhir Bale, Ajay and Raghavan Reddy, Suhaas Veera. "Use of genetic algorithms in software testing models". Computational Intelligence in Software Modeling, edited by Vishal Jain, Jyotir Moy Chatterjee, Ankita Bansal, Utku Kose and Abha Jain, Berlin, Boston: De Gruyter, 2022, pp. 81-92.<https://doi.org/10.1515/9783110709247-006>
- [37] Vinay, N., Bale, A.S., Tiwari, S. and Baby, C.R. (2022). Artificial Intelligence as a Tool for Conservation and Efficient Utilization of Renewable Resource. In Artificial Intelligence for Renewable Energy Systems (eds A.K. Vyas, S. Balamurugan, K.K. Hiran and H.S. Dhiman).<https://doi.org/10.1002/9781119761686.ch2>

Ajay Sudhir Bale, S. Saravana Kumar, S. Varun Yogi, Swetha Vura, R. Baby Chithra, N. Vinay, P. Pravesh, Chapter 8 - Network and security leveraging IoT and image processing: A quantum leap forward, Editor(s): Prashant Johri, Adarsh Anand, Jüri Vain, Jagvinder Singh, Mohammad Quasim, In Emerging Methodologies and Applications in Modelling, System Assurances, Academic Press, 2022, Pages 123-141, ISBN 9780323902403, <https://doi.org/10.1016/B978-0-323-90240-3.00008-4>

- [38] Bale, A.S., Kumar, S.S., Kiran Mohan, M.S., Vinay, N. (2022). A Study of Improved Methods on Image Inpainting. In: Johri, P., Diván, M.J., Khanam, R., Marciszack, M., Will, A. (eds) Trends and Advancements of Image Processing and Its Applications. EAI/Springer Innovations in Communication and Computing. Springer, Cham.https://doi.org/10.1007/978-3-030-75945-2_15
- [39] Basha, Syed Muzamil, Ravi Kumar Poluru, and Syed Thouheed Ahmed. "A Comprehensive Study on Learning Strategies of Optimization Algorithms and its Applications." In *2022 8th International Conference on Smart Structures and Systems (ICSSS)*, pp. 1-4. IEEE, 2022.
- [40] A. S. Bale et al., "Cancer Detection using Artificial Neural Networking Techniques: A Study," 2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N), 2021, pp. 955-960, doi: 10.1109/ICAC3N53548.2021.9725641.
- [41] A. S. Bale et al., "Advancements of Lab on Chip in Reducing Human Intervention: A Study," 2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N), 2021, pp. 38-42, doi: 10.1109/ICAC3N53548.2021.9725466.
- [42] A. S. Bale et al., "Smart SMPS Based Grid To Support Renewable Energy Systems," 2021 3rd International Conference on Advances in Computing, Communication Control and Networking (ICAC3N), 2021, pp. 1234-1239, doi: 10.1109/ICAC3N53548.2021.9725606
- [43] Bale, A. S. ., Tiwari, S. ., Khatokar, A. ., N, V. ., & Mohan M S, K. . (2021). Bio-Inspired Computing-A Dive into Critical Problems, Potential Architecture and Techniques. Trends in Sciences, 18(23), 703.<https://doi.org/10.48048/tis.2021.703>
- [44] S. S. Kumar, A. Sudhir Bale, P. M. Matapati and V. N, "Conceptual Study of Artificial Intelligence in Smart Cities with Industry 4.0," 2021 International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), 2021, pp. 575-577, doi: 10.1109/ICACITE51222.2021.9404607.
- [45] A. S. Bale et al., "Mobile Cloud Computing - Enabling Technologies and Applications," 2021 6th International Conference on Signal Processing, Computing and Control (ISPCC), 2021, pp. 491-496, doi: 10.1109/ISPCC53510.2021.9609344.
- [46] Naveen Ghorpade and P. Vijaykarthik 2021 IOP Conf. Ser.: Mater. Sci. Eng. 1022.012084
- [47] Ghorpade, Dr. Vijaykarthik. P, N. (2019). Energy Efficient Mobile Sink Based Routing Model For Maximizing Lifetime of Wireless Sensor Network. Global Journal Of Computer Science And Technology, .