# BAB VI

# KESIMPULAN DAN SARAN

## 6.1 Kesimpulan

Pengembangan aplikasi mobile untuk rekomendasi pengenalan monumen bersejarah di kota Manado telah selesai dikembangkan. Aplikasi ini dikembangkan dengan menggunakan metode *k-NN* dan *Collaborative Filtering* dalam membuat sistem rekomendasi untuk pengenalan monumen bersejarah di kota manado berbasis *mobile* dengan *Location Based Service* (LBS) sebagai tools layanan berbasis lokasi.

Kesimpulan yang dapat penulis sampaikan pada bagian ini adalah Rekomendasi Monumen membuat wisatawan dapat memperoleh informasi mengenai monumen di kota Manado dengan cepat dan mudah. Lokasi monument dapat diperoleh menggunakan menu petunjuk arah pada masing-masing monument yang bertujuan mempermudah pengguna dalam mencapai lokasi monument karena ditampilkannya rute yang harus dilalui dari posisi awal pengguna berada. Perpaduan aplikasi mobile menggunakan *Location Based Service*s (LBS) dengan *k-NN* dan *Collaborative Filtering* dipilih karena sifatnya yang interaktif, artinya terjadi interaksi dua arah antara pengguna dengan sistem, dimana sistem akan merekomendasikan monument dengan mudah dan menarik untuk dipilih oleh wisatawan. Sehingga daya tarik

terhadap wisatawan yang berkunjung di kawasan monument semakin meningkat di kota Manado. Sistem aplikasi telah memenuhi kebutuhan dan mampu berjalan sesuai dengan spesifikasinya untuk menjadi sebuah aplikasi yang dapat digunakan sebagai sistem rekomendasi objek wisata khususnya wisata Monumen Sejarah yang ada di kota Manado.

## 6.2 Saran

Setelah penulis menyelesaikan penelitian ini dan mendapatkan kesimpulan sebagaimana yang telah diuraikan pada bagian sebelumnya, terdapat beberapa hal yang ingin penulis sampaikan sebagai bentuk saran untuk menunjang penelitian-penelitian berikutnya. Berikut ini adalah saran dari penulis diantaranya sebagai berikut :

1. Apliakasi sistem rekomendasi ini perlu dikembangkan dengan metode yang lain untuk mendapatkan perbandingan kinerja sehingga diperoleh metode yang terbaik.
2. Sistem rekomendasi tidak hanya dapat diterapkan pada bidang pariwisata saja, tetapi juga dapat diterapkan pada bidang-bidang yang lain sehingga perlu penelitian lebih lanjut terutama untuk domain penelitian dengan permasalahan yang lebih komplek.

# DAFTAR PUSTAKA


Amin, D., & Govilkar, S. (2015). Comparative Study of Augmented Reality SDK's. *International Journal on Computational Science & Applications (IJCSA) , 5* (1), 11-26.

Arnhold, M., Quade, M., & Kirch, W. (2014). Mobile Applications for Diabetics: A Systematic Review and Expert-Based Usability Evaluation Considering the Special Requirements of Diabetes Patients Age 50 Years or Older. *Journal Of Medical Internet Research , 16* (4), 1-18.

Aurelia, S., Raj, M. D., & Saleh, O. (2014). A Survey on Mobile Augmented Reality Based Interactive Storytelling. *Advances in Information Science and Applications , 2*, 534-540.

Bacca, J., Baldiris, S., Fabregat, R., Graf, S., & Kinshuk. (2014). Augmented Reality Trends in Education: A Systematic Review of Research and Applications. *Educational Technology & Society , 17* (4), 133–149.

Behringer, R., & Macintyre, B. (2001). Recent advances in augmented reality. *IEEE Computer Graphics and Applications* , 34-47.

Bhattacharya, S., & Panbu, M. B. (2013). Design and Development of Mobile Campus, an Android based Mobile Application for University Campus Tour Guide. *International Journal of Innovative Technology and Exploring Engineering (IJITEE) , 2* (3), 25-29.

BPS. (2014). *Kabupaten Sumba Barat Daya*. Badan Pusat Statistik Kab. Sumba Barat Daya.

Budianto, T., & Hermawan, G. (2013). Rancang Bangun Music Recommender System Dengan Metode User-Based Collaborative Filtering. *Jurnal Ilmiah Komputer dan Informatika (KOMPUTA) , 2* (2), 2089-9033.

Cebeci, Z., & Yildiz, F. (2015). Comparison of K-Means and Fuzzy C-Means Algorithms on Different Cluster Structures. *Journal of Agricultural Informatics , 6* (3), 13-23.

Chang, H.-Y., Wu, H.-K., & Hsu, Y.-S. (2013). Integrating a mobile augmented reality activity to contextualize student learning of a socioscientific issue. *British Journal of Educational Technology , 44* (3), E95–E99.

Chinetha, K., Daphney Joann, J., & Shalini, A. (2015). An Evolution of Android Operating System and Its Version. *International Journal of Engineering and Applied Sciences (IJEAS) , 2* (2), 30-33.

Chinetha, K., Joann, J., & Shalini, A. (2015). An Evolution of Android Operating System and Its Version. *International Journal of Engineering and Applied Sciences (IJEAS) , 2* (2), 30-33.

DITJENPDT. (2016). *Kabupaten Sumba Barat Daya.* Direktorat Jenderal Pembangunan Daerah Tertinggal.

Djanali, S., Mazharuddin S, A., & Elian, A. (2012). Layanan Informasi Kereta Api Menggunakan GPS, Google Maps, dan Android. *Jurnal Teknik Pomits , 1* (1), 1-6.

Doshi, P., Jain, P., & Shakwala, A. (2014). Location Based Services and Integration of Google Maps in Android. *International Journal Of Engineering And Computer Science (IJECS) , 3* (3), 5072-5077.

DPEK. (2014). *Kabupaten Sumba Barat Daya.* Dinas Pariwisata dan Ekonomi Kreatif Propinsi Nusa Tenggara Timur.

Fernández, V., Orduña, J. M., & Morillo, P. (2013). How mobile phones perform in collaborative augmented reality (CAR) applications. *J Supercomput , 65*, 1179–1191.

Frias, A., Cabral, J., & Costa, Á. (2015). Logistic optimization in tourism networks. *World Reinance: Changing roles for people and places. 55*, pp. 1-22. Lisbon: ersa congress.

Gavalas, D., & Kenteris, M. A Web-Based Pervasive Recommendation System For Mobile Tourist Guides. *Pers Ubiquit Comput , 759–770* (15).

Gavalas, D., Konstantopoulos, C., Mastakas, K., & Pantziou, G. (2013). Mobile Recommender Systems in Tourism. *Journal ofNetworkandComputerApplications , 39*, 319-333.

Ghosh, S., & Dubey, S. K. (2013). Comparative Analysis of K-Means and Fuzzy C-Means Algorithms. *International Journal of Advanced Computer Science and Applications (IJACSA) , 4* (4), 35-39.

Ghouaiel, N., Cieutat, J.-M., & Jessel, J.-P. (2013). Mobile Augmented Reality to Discover New Environments . *arXiv* , 1-11.

Gjorgievski, M., Kozuharov, S., & Nakovski, D. (2013). Tipology of recreational-tourism resources as an important element of the tourist offer. *UTMS Journal of Economics , 4* (1), 53–60.

Gjorgievski, M., Kozuharov, S., & Nakovski, D. (2013). Typology of Recreational-Tourism Resources As an Important Element. *Journal of Economics , 4* (1), 53-60.

Hameed, M. A., Al Jadaan, O., & Ramachandram, S. (2012). Collaborative Filtering Based Recommendation System: A survey. *International Journal on Computer Science and Engineering (IJCSE) , 4* (5), 859-876.

Harahap, N. S. (2012). *Pemrograman Aplikasi Mobile Smartphone dan Tablet PC Berbasis Android*. Bandung: Informatika.

Harley, J. M., Poitras, E. G., Jarrell, A., Duffy, M. C., & Lajoie, S. P. (2016). Comparing virtual and location-based augmented reality mobile learning: emotions and learning outcomes. *Association for Educational Communications and Technology* , 1-30.

Harrison, R., Flood, D., & Duce, D. (2013). Usability of mobile applications: literature review and rationale for a new usability model. *Journal of Interaction Science , 1* (1), 1-16.

Harrison, R., Flood, D., & Duce, D. (2013). Usability of mobile applications: literature review and rationale for a new usability model. *Interaction Science* , 1-16.

Holla, S., & Katti, M. M. (2012). Android Based Mobile Application Development And Its Security. *International Journal of Computer Trends and Technology , 3* (3), 486-490.

Jadav, J. D., Pratiksha, S., & Sunita, G. (2016). Map Application Using Augmented Reality Technology for Smart Phones. *International Journal of Science and Engineering Applications , 5* (8), 421-424.

Jadhav, J., Pratiksha, S., & Sunita, G. (2016). Map Application Using Augmented Reality Technology for Smart Phones. *International Journal of Science and Engineering Applications , 5* (8), 421-424.

Jin, S., Li, H., & Liu, Y. (2012). Research on media player based on Android. *International Conference on Fuzzy Systems and Knowledge Discovery (FSKD). 9,* pp. 2326-2329. Chongqing: Institute of Electrical and Electronics Engineers (IEEE).

Kadam, N., & Kumar, S. (2016). A review of Content and Collaborative filtering approaches on Movielens Data. *International Research Journal of Engineering and Technology (IRJET) , 3* (3), 273-278.

KEMENPAR. (2009). *Undang-Undang Nomor 10 Tahun 2009.*

Khamis, H. S., Cheruiyot, K. W., & Kimani, S. (2014). Application of k- Nearest Neighbour Classification in Medical Data Mining. *International Journal of Information and Communication Technology Research , 4* (4), 121-128.

Kirom, N. R., Sudarmiatin, & Putra, I. W. (2016). Faktor-Faktor Penentu Daya Tarik Wisata Kepuasan Wisatawan. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan , 1* (3), 536-546.

Krevelen, R. V., & Poelman, R. (2010). A Survey of Augmented Reality Technologies, Applications and Limitations. *Virtual Reality , 9* (2), 1-21.

Leask, A. (2010). Progress in visitor attraction research: Towards more effective management. *Tourism Management , 31*, 155–166.

Lee, V., Schneider, H., & Schell, R. (2004). *Mobile Applications: Architecture, Design, and Development.* New Jersey, USA: Prentice Hall PTR Upper Saddle River.

Li, L., Yuan, S. M., & Jiang, N. (2014). An Analysis of the Influencing Factors of Customer Retention in Tourism Resort Industry: A Case Study of Lingnan Impression Park, Guangzhou, China. *Eurasian Journal of Business and Management , 2* (2), 1-13.

Lima, J. P., Simões, F., Figueiredo, L., & Kelner, J. (2010). Model Based Markerless 3D Tracking applied to Augmented Reality. *SBC Journal on 3D Interactive Systems , 1*, 2-15.

Ma, L., Gu, L., & Wang, J. (2014). Research and Development of Mobile Application for Android Platform. *International Journal of Multimedia and Ubiquitous Engineering , 9* (4), 187-198.

Ma, L., Gu, L., & Wang, J. (2014). Research and Development of Mobile Application for Android Platform. *International Journal of Multimedia of Mobile Application for Android Platform , 9* (4), 187-198.

Malik, A., & Kajala, A. (2014). Location Based Services Using Data Mining For Mobile Users. *International Journal on Recent and Innovation Trends in Computing and Communication (IJRITCC) , 2* (4), 920-923.

Milgram, P., & Kishino, F. (1994). A taxonomy of Mixed Reality Visual Displays. *IEICE Transactions on Information Systems , E77-D* (12), 1321-1329.

Milner, G. (2016). What is GPS? *Journal of Technology in Human Services , 34* (1), 9-12.

Milner, G. (2016). What is GPS? *Journal of Technology in Human Services , 34* (1), 9-12.

Muljadi, A. (2009). *Kepariwisataan dan Perjalanan.* Jakarta: PT Raja Grafindo Persada.

Nam, Y. (2015). Designing Interactive Narratives for Mobile Augmented Reality. *Cluster Comput* , 309–320.

Narayana, B. S., & Praveen, R. (2013). Mobile Location-Based Tour guide System. *International Journal of Computer Trends and Technology (IJCTT) , 4* (5), 1287-1290.

Narmatha, M., & KrishnaKumar, S. V. (2016). Study on Android Operating System And Its Versions. *International Journal of Scientific Engineering and Applied Science (IJSEAS) , 2* (2), 439-445.

Narmatha, M., & Kumar, S. V. (2016). Study on Android Operating System And Its Versions. *International Journal of Scientific Engineering and Applied Science (IJSEAS) , 2* (2), 439-445.

Ngindi, C. D. (2016). Landasan Konseptual Perencanaan Dan Perancangan Hotel Resor Di Kabupaten Sumba Barat Daya. *Jurnal UAJY* .

Nivedha, S., & Hemalatha, S. (2015). A Survey on Augmented Reality. *International Research Journal of Engineering and Technology (IRJET) , 2* (2), 87-96.

Ojas, U., & Aqil, S. (2016). ATMA : Android Travel Mate Application. *International Journal of Computer Applications , 2* (2), 543-549.

Oktavianto, M. H., Wibowo, A. T., & Rismala, R. (2017). Analisis dan Implementasi Imputation-Boosted Neighborhood-Based Collaborative Filtering Menggunakan Genre Film. *Ind. Journal on Computing , 2* (1), 2460-9056.

Pawar, S. S., Kadan, A. S., Chavhan, P. R., Ranjane, P. R., & Lohar, A. S. (2016). Android Based Tourist Guide System. *International Journal of Engineering Technology, Management and Applied Sciences (IJETMAS) , 4* (2), 42-46.

Pendit, U. C., Zaibon, S. B., & Bakar, J. A. (2014). Mobile Augmented Reality for Enjoyable Informal Learning in Cultural Heritage Site. *International Journal of Computer Applications , 92* (14), 19-26.

Priya, N., Hemavathi, M., Mohanram, S., & Rajeshkumar, N. (2016). Trajectory of End User Geographical Location Using LBS Systems. *International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) , 5* (3), 635-638.

Priya, N., Hemavathi, M., Mohanram, S., & Rajeshkumar, N. (2016). Trajectory of End User Geographical Location Using LBS Systems. *International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) , 5* (3), 635-638.

Putri, N. M., & Yudiyana, I. M. (2015). Perancangan Sistem Penentuan Kunjungan Tempat Wisata Daerah Bali Menggunakan Metode K-Nearest Neighbour. *Konferensi Nasional Sistem & Informatika* , 961-966.

Ram, Y., Bjork, P., & Weidenfeld, A. (2016). Authenticity and place attachment of major visitor attractions. *Tourism Management , 52*, 110-122.

Ram, Y., Bjork, P., & Weidenfeld, A. (2016). Authenticity and place attachment of major visitor attractions. *Tourism Management , 52*, 110-122.

Rani, R., Kumar, A. P., Adarsh, D., Mohan, K. K., & Kiran, K. V. (2012). Location Based Service In Android. *International Journal of Advances in Engineering & Technology (IJAET) , 3* (1), 209-220.

Rattanarungrot, S., White, M., Patoli, Z., & Pascu, T. (2014). The Application of Augmented Reality for Reanimating Cultural Heritage. *Proceedings of the 6th International Conference on Virtual, Augmented and Mixed Reality. 8526*, pp. 85-95. New York: Springer-Verlag.

Reuterdahl, H. (2014). *Mobile Marker-based Augmented Reality as an Intuitive Instruction Manual.* Stockholm: KTH Technology and Health.

Sankar, M. V., & Sudhakar, P. (2013). Mobile Travel Guide - Smart Way to Travel. *International Journal of Advanced Computing , 46* (2), 612-614.

Sarkaleh, M. K., Mahdavi, M., & Baniardalan, M. (2012). Designing a Tourism Recommender System Based on Location, Mobile Device and User Features in Museum. *International Journal of Managing Information Technology (IJMIT) , 4* (2), 13-21.

Shah, P., Gadgil, R., & Tamhankar, N. (2012). Location Based Reminder Using GPS For Mobile ( Android ). *ARPN Journal of Science and Technology , 2* (4), 377-380.

Singh, G., & Singh, I. (2014). Android Os Based Wireless Data Acquisition System Via Bluetooth. *International Journal of Research in Engineering and Technology (IJRET) , 3* (6), 163-167.

Singh, R. (2014). An Overview of Android Operating System and Its Security Features. *International Journal of Engineering Research and Applications , 4* (2), 519-521.

Tarng, W., Ou, K.-L., Yu, C.-S., Liou, F.-L., & Liou, H.-H. (2015). Development of a virtual butterfly ecological system based on augmented reality and mobile learning technologies. *Virtual Reality* (19), 253–266.

Turban, E. (2012). New Jersey: Pearson Prentice Hall.

Turban, E. (2012). *Electronic Commerce 2012 Global Edition* (7th ed.). USA: Pearson Higher Ed USA.

Turban, E., King, D., Lee, J. K., Liang, T. P., & Turban, D. C. (2014). *Electronic Commerce (A Managerial and Social Networks Perspective)* (8th Revised edition ed.). (S. C. London, Ed.) Kihei: Pearson Education (US).

Uddin, P., Islam, Z., & Nadim. (2013). GPS-based Location Tracking System via Android Device. *International Journal of Research in Computer Engineering and Electronics , 2* (5), 1-7.

Uddin, P., Islam, Z., Nadim, & Afjal, M. (2013). GPS-based Location Tracking System via Android Device. *International Journal of Research in Computer Engineering and Electronics (IJRCEE) , 2* (5), 1-7.

Undang-Undang No.16. (2007). *Pembentukan Kabupaten Sumba Barat Daya.* Undang-Undang Nomor 16 tahun 2007 Tentang Pembentukan Kabupaten Sumba Barat Daya di Provinsi Nusa Tenggara Timur.

Vazquez-Alvarez, Y., Oakley, I., & Brewster, S. A. (2012). Auditory display design for exploration in mobile audio-augmented reality. *Pers Ubiquit Comput , 16*, 987–999.

Wagner, D., Schmalstieg, D., & Bischof, H. (2009). Multiple target detection and tracking with guaranteed framerates on mobile phones. *International Symposium on Mixed and Augmented Reality (ISMAR). 8*, pp. 57-64. Orlando: IEEE Computer Society.

Wang, H., Liao, C., & Yang, L. (2013). What Affects Mobile Application Use? The Roles of Consumption Values. *International Journal of Marketing Studies , 5* (2), 11-22.

Wang, H.-Y., Liao, C., & Yang, L.-H. (2013). What Affects Mobile Application Use? The Roles of Consumption Values. *International Journal of Marketing Studies , 5* (2), 11-22.

Yadav, J., & Sharma, M. (2013). A Review of K-mean Algorithm. *International Journal of Engineering Trends and Technology (IJETT) , 4* (7), 2972-2976.

Yuen, S. C., & Johnson, E. (2011). Augmented Reality: An Overview and Five Directions for AR in Education. *Journal of Educational Technology Development and Axchange , 4* (1), 119-140.

Zhou, T. (2012). Examining Location-Based Services Usage From the Perspectives of Unified Theory of Acceptance and Use of Technology and Privacy Risk. *Journal of Electronic Commerce Research , 13* (2), 135-144.

Zhou, T. (2012). Examining Location-Based Services Usage From The Perspectives Of Unified Theory Of Acceptance And Use Of Technology And Privacy Risk. *Journal of Electronic Commerce Research , 13* (2), 135-144.