

NO CODE ML: Partial Automation of Data Analysis

Syed Muntazir Mehdi, Batool Rizvi Mehdi, ShabbirKagalwala, Mohammad Mahdi
M.H. Saboo Siddik College of Engineering, Mumbai, Maharashtra

Abstract: Machine Learning, a core facet of Artificial Intelligence and Computer Science, leverages information and algorithms to enhance learning and improve precision. The NoCode Machine Learning project presents a web-based application that empowers users to execute diverse machine learning tasks without manual coding. Its intuitive user interface caters to domain specialists, business analysts, and machine learning enthusiasts, enabling them to effortlessly upload datasets, preprocess data, train models, and evaluate performance. This paper seeks to conduct an in-depth analysis of the potential impact of the NoCode Machine Learning project on the Data Science Industry. It examines the application's features, usability, and performance, while comparing its efficacy against conventional code-based methodologies. The NoCode ML project stands as a pioneering endeavor, as it forges a code-free pathway to interact with ML algorithms through a graphical interface. The paper explores the pivotal steps in the machine learning process, encompassing dataset uploading, data preprocessing, model training, and evaluation, utilizing metrics like Mean Absolute Error (MAE), Mean Squared Error (MSE), and Root Mean Squared Error (RMSE). Additionally, the NoCode ML project boasts a Tabler Dashboard, equipped with project management tools to track progress, milestones, and tasks. While the application demonstrates numerous advantages, it also faces certain challenges, such as limited model options and the necessity of external data preprocessing. In conclusion, the NoCode Machine Learning project emerges as a valuable tool, revolutionizing machine learning practices by rendering them accessible and dispelling the barriers of coding. It offers a user-friendly platform, propelling diverse users to wield the power of machine learning effectively and contribute to the ever-evolving landscape of knowledge and technology.

Keywords: Machine Learning

REFERENCES

- [1] A Review on Linear Regression Comprehensive in Machine Learning
<https://doi.org/10.38094/jastt1457> Published 2020-12-31 Dastan Maulud, Adnan M. Abdulazeez
- [2] S. Shalev-Shwartz and S. Ben-David, Understanding machine learning: From theory to algorithms: Cambridge university press, 2014.
- [3] K. P. Murphy, Machine learning: a probabilistic perspective: MIT press, 2012.
- [4] P. Domingos, "A few useful things to know about machine learning," Communications of the ACM, vol. 55, pp. 78-87, 2012.
- [5] D. Q. Zeebaree, H. Haron, A. M. Abdulazeez, and D. A. Zebari, "Machine learning and Region Growing for Breast Cancer Segmentation," in 2019 International Conference on Advanced Science and Engineering (ICOASE), 2019, pp. 88-93.
- [6] Bargarai, F., Abdulazeez, A., Tiryaki, V., & Zeebaree, D. (2020). Management of Wireless Communication Systems Using Artificial Intelligence-Based Software Defined Radio.
- [7] J. Xie, Z. Li, Z. Zhou and S. Liu, "A Novel Bearing Fault Classification Method Based on XGBoost: The Fusion of Deep Learning-Based Features and Empirical Features," in *IEEE Transactions on Instrumentation and Measurement*, vol. 70, pp. 1-9, 2021, Art no. 3506709, doi: 10.1109/TIM.2020.3042315.
- [8] Mitchell, TM. (1997). Machine Learning, McGraw-Hill International.
- [9] Fisher, RAF. (1936). The use of multiple measurements in taxonomic problems. Annual Eugenics, 7, 179-188.

- [10] Harrison, DH., & Rubinfeld, DLR. (1978). Hedonic prices and the demand for clean air. *J. Environ. Economics and Management*, 5, 81-102.
- [11] Rosenblatt, FR. (1959). The perceptron: a probabilistic model for information storage and organization in the brain. *Psychological Review*, 65, 386-408.
- [12] Duda, RD., & Hart, PH. (1973). *Pattern Classification and Scene Analysis*, John Wiley & Sons.
- [13] From Data Management to Actionable Findings: A Five-Phase Process of Qualitative Data Analysis Andrea J. Bingham <https://orcid.org/0000-0002-1536-8751>
- [14] Bingham A. J. (2017). Personalized learning in high technology charter schools. *Journal of Educational Change*, 18(4), 521–549. Crossref
- [15] Bingham A. J., Mitchell R., Carter D. (In press). *A practical guide to theoretical frameworks for social science research*. Routledge.
- [16] Bingham A. J., Pane J., Steiner E., Hamilton L. (2018). Ahead of the curve: Implementation challenges in the personalized learning movement. *Educational Policy*, 32(3), 454–489. Crossref
- [17] Bingham A. J., Witkowsky P. (2022). Deductive and inductive approaches to qualitative data analysis. In Vanover C., Mihas P., Saldaña J. (Eds), *Analyzing and interpreting qualitative data: After the interview*. Sage Publications.
- [18] Bitchener J., Basturkmen H. (2006). Perceptions of the difficulties of postgraduate L2 thesis students writing the discussion section. *Journal of English for Academic Purposes*, 5(1), 4–18. <https://doi.org/Crossref>.
- [19] Krämer, Jonathan & Thiele, Gregor & Johanni, Theresa & Krüger, Jörg. (2021). Automation of Life Data Analysis Processes. IOP Conference Series: Materials Science and Engineering. 1140. 012022. 10.1088/1757-899X/1140/1/012022.
- [20] Data Analysis and Visualization Platform Design for Batteries Using Flask-Based Python Web Service Zuyi Liang, Jinan University, International Energy School, Zongwei Liang <liang_zongwei888@163.com>, YubinZheng <zheng_yubin911@163.com>, Jinan University, International Energy School, Beichen Liang, Jinan University, International Energy School, LinfengZheng <lfzheng@jnu.edu.cn>, Jinan University, International Energy School, C C Chan, Jinan University, International Energy School, Yoichi Hori, Jinan University, International Energy School, James L Kirtley, Joeri Van Mierlo, MyoungHoSunwoo, Xuhui Wen
- [21] Sun, XS., Li, ZL., Wang, XW., & Li, CL. (2020). Technology development of electric vehicles: A review. *Energies*, 13, .
- [22] Li, SL., He, HH., & Li, JL. (2019). Big data driven lithium-ion battery modeling method based on SDAE-ELM algorithm and data pre-processing technology. *Appl. Energy*, 242, 1259-1273.
- [23] Tingfeng, DT. (2016). Research and Design on Electric Vehicle Power Battery Assembly Testing System.
- [24] Rahmawatie, BR., Sutopo, WS., Fahma, FF., Purwanto, AP., Nizam, MN., Louhenapessy, BBL., & Mulyono, ABM. (2-5 October 2017. 2018). Designing framework for standardization and testing requirements of battery management system for electric vehicle application. Proceedings of the 2017 4th International Conference on Electric Vehicular Technology (ICEVT), , .
- [25] He, HH., Xiong, RX., & Peng, JP. (2016). Real-time estimation of battery state-of-charge with unscented Kalman filter and RTOS μ COS-II platform. *Appl. Energy*, 162, 1410-1418.