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Registration Participants

Non-Author / Co-Author/ Simple Participants (no paper)

100 USD (With proceedings)

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ACCEPTED PAPERS

DESIGN OF PROPRIETARY FRAMEWORKS FOR NEURAL MODELS: METHODOLOGY AND BEST PRACTICES

José Gabriel Carrasco Ramirez, CEO at Quarks Advantage, Jersey City, New Jersey. United States of America

ABSTRACT

The creation of proprietary frameworks for the development of neural models is essential to meet specific needs that generic frameworks cannot address. This article examines the key stages in the design of these frameworks and offers best practices for their effective implementation. It explores everything from needs identification and resource assessment to architectural design and implementation. Additionally, it emphasizes the importance of user-centered design and continuous evaluation to ensure the framework's usability and adaptability to changing needs.

KEYWORDS

Proprietary frameworks, neural models, artificial intelligence, framework design, model optimization, user-centered design, continuous evaluation, scalability, performance optimization, data management, model training, regulatory compliance, explainable AI (XAI), agile methodology, security and privacy.

MULTI-CLASSIFICATION OF CAD ENTITIES: LEVERAGING THE ENTITY-AS-NODE APPROACH WITH GRAPH NEURAL NETWORKS

Sheela Raju Kurupathi1, Park Dongryul1, Sebastian Bosse1, and Peter Eisert1, 2, 1Fraunhofer Heinrich Hertz Institute (HHI), 2Humboldt-Universität zu Berlin

ABSTRACT

The construction industry faces challenges in extracting and interpreting semantic information from CAD floor plans and related data. Graph Neural Networks (GNNs) have emerged as a potential solution, preserving the structural integrity of CAD drawings without rasterization. Accurate identification of structural symbols, such as walls, doors, windows, etc. is vital for generalizing floor plans. This paper investigates GNN methods to enhance the classification of these symbols in CAD floorplans, proposing an entity-as-node graph representation. We evaluate various preprocessing strategies and GNN architectures, including Graph Attention Networks (GAT), GATv2, Generalized Aggregation Networks (GEN), Principal Neighborhood Aggregation (PNA), and Unified Message Passing (UniMP) on the CubiCasa5K dataset. Our results show that these methods significantly outperform current state-of-the-art approaches, demonstrating their effectiveness in CAD floor plan entity classification.

KEYWORDS

BIM, CAD, Floor Plans, GNN, Entity-as-Node, Multi-Classification.

FACILITATING STOCK RECOMMENDATIONS THROUGH SENTIMENT ANALYSIS

Shlok Bhura, Tanish Bhilare, Rylan Nathan Lewis and Dr. Kavita Kelkar, Department of Computer Engineering, K.J. Somaiya College of Engineering, Mumbai, India

ABSTRACT

Sentiment analysis is a relatively new method of stock recommendation that assesses news articles, social media feeds, and other information sources to ascertain investor sentiment towards a particular stock using machine learning and natural language processing. The model suggests whether to buy, hold, or sell the stock based on sentiment analysis. By emphasising trends and patterns in investor sentiment, the objective is to give investors insightful information that can help their decision-making. Several methods, including Decision Trees, Random Forests, Logistic Regression, and Gradient Boosting, were implemented to find the most accurate sentiment analysis model. With an accuracy score of 85.02% among all, the Random Forest model came out as the most appropriate.

KEYWORDS

Tokenization, Stocks, Sentiment Analysis, LSTM, YFinance, Gradient Boosting, Decision Trees, Random Forests, Logistic Regression, Stock Market &TextBlob.

SOFTWARE ENGINEERING FOR DEVELOPING A RECOMMENDATION PERSONALIZED ELDERLY CARE MOBILE APPLICATION

Hadeel Al-Obaidy, Maha Mohammed, Musheera Moqbel and Noor Jaafar, Department of Computer Science, University of Bahrain, Zallaq, Bahrain

ABSTRACT

The aim of this article proposes an innovative solution for developing FAZZA'AH, a technological advancement tailored specifically for the elderly and volunteer enthusiasts in Bahrain and the Middle East. The proposed system simplifies daily tasks for the elderly, enriching their lives with convenience and accessibility. It also fosters a culture of volunteerism among the youth by providing opportunities for meaningful engagement across various service categories. The system is highly adaptable and effective in bridging generational divides and inspiring social responsibility, empowering both the elderly and youth to lead purposeful lives rooted in connection and service. Implementation results have demonstrated that FAZZA'AH is reliable, adaptable, and efficient, with the potential to significantly enhance the quality of life for its users.

ARTIFICIAL INTELLIGENCE TEXT IDENTIFICATION SYSTEMS BASED ON THE BERT MODEL AND THE TF-IDF MODEL

Raphaël Jeanningros[1] and Sonam Mittal[2], [1]Department of Computer Engineering, CY Tech, Pau, FRANCE, [2]Department of Information Technology, BK Birla Institute of Engineering and Technology, Pilani, INDIA

ABSTRACT

In recent years, large language models (LLM) have been increasingly sophisticated, capable of generating text that is difficult to distinguish from human-written text. For this purpose, everyday, new detectors are created as the purpose to follow the fast evolution of LLMs. Thus far, most of the artificial intelligence (AI) text identification systems are working on the basis of the BERT model, but we can still see some systems working on the basis of the TF-IDF model. So, this study aims to understand which differences exist between AI generated content and human written content. In the second part to create one AI text identification system based on the BERT model and another system based on the TF-IDF model. And the last step is to analyze the results of each AI text identification system and conclude on the most efficient and accurate system.

TRANSFORMATION OF PRINTED TEACHING MATERIALS INTO DIGITAL FORM

Natalia Hrkotáčová and Adriana Kičková, Department of Pedagogy, University of Constantine the Philosopher, Nitra, Slovakia

ABSTRACT

The study focuses on the identification of criteria for the transformation of printed teaching texts and materials into digital form. Based on the identified criteria, the goal is to upgrade the form of printed teaching texts, in accordance with the needs of education in the 21st century, into a digital form. In order to increase the level of competence of teacher students in the field of handling digital platforms, work with digital resources was included in a specific subject in their undergraduate preparation for higher education. The output of the study is a concrete demonstration of the transformation of printed content into digital form and the presentation of data of a group of students educated in the field of handling digital resources during their undergraduate training in a specific subject.

KEYWORDS

Education for the 21st century, digital learning materials, print learning materials, digitization, undergraduate training.

LEVERAGING GENAI FOR ON-DEMAND TUTORING AS A NEW PARADIGM IN EDUCATION

Maikel Leon, Department of Business Technology, Miami Herbert Business School, University of Miami, Florida, USA.

ABSTRACT
Traditional education often fails to provide personalized, immediate support to all students, leading to gaps in understanding and learning inequality. Generative Artificial Intelligence (GenAI) offers a scalable, cost-effective solution for on-demand tutoring, providing personalized, 24/7 support. This paper explores the application of GenAI as an on-demand tutoring system, addressing the critical need for personalized, immediate educational support. Using GenAI to create an on-demand tutoring system that offers personalized, real-time student support is vital to today's academic needs. Crucial components of this approach include advanced natural language processing to understand and respond to student queries, machine learning algorithms to adapt to individual learning styles, and a scalable cloud-based infrastructure to ensure 24/7 availability. This approach's expected scientific surplus value lies in its potential to significantly enhance educational outcomes by providing scalable, personalized learning experiences. This paper outlines a pathway for future research and development in this area, highlighting the potential of GenAI to revolutionize education and improve learning outcomes for all students.

KEYWORDS
Generative AI, On-Demand Tutoring, and Education.

THE ROLES OF PRINCIPALS IN ENCOURAGING TEACHER COLLABORATION AT UNIVERSITY: AN OVERVIEW

Nguyen Dinh Nhu Ha, Ha Thi Ngoc Thuong, Nguyen Thanh Binh, Faculty of Foreign Languages – Technical Education, HCMC Nong Lam University, Vietnam

ABSTRACT
Collaboration between teachers is a significant predictor of outcome variables at the school, teacher, and student levels. As they are in charge of establishing the work settings for teachers, principals have the power to encourage and develop teacher collaboration.The aim of this case study was to gain insight into how important principals' roles are in establishing and maintaining a cooperative work environment between teachers. With the document analysis method, the paper is going to discuss principals' roles in encouraging collaboration between teachers, the benefits of teacher collaboration, and links between principals' roles and teacher collaboration. Hopefully, it would be a precious source for both principals and teachers to be aware of the importance of collaboration at tertiary level.

KEYWORDS
Collaboration, Roles of principals, Tertiary level, Sustainable development.

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