**Raport de proiect**

**Intalnire 3, 26.03.2024**

**Documentatie finala**

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Schita raport tehnic proiect (articol)

* Abstract: prezentarea temei, analiza problemei, rezolvarile propuse pe baza unor investigatii, comparatia dintre diferite implementatii, concluzii
* I. Intoducere: Propunerea temei de recunoastere a genului muzical, prezentarea din documentatie a ideei si a importantei (cazuri propuse: retele si platforme de muzica, algoritmi de recomandari, asistenti virtuali etc.). Prezentarea diferitor solutii propuse, pe baza documentatiei (bibliografiei/referintelor) si pe scurt cum care solutie ce este, cu ce difera, si cum va fi/este implementata
* II. Fundamentare teoretica: descrierea genurilor muzicale si a diferentelor (perceptuale si informationale), descriere generala algoritmi de recomandare de muzica, importanta recunoasterii genului muzical, metode intalnite in literatura pentru clasificarea genurilor (din referinte) si descrierea tehnologiilor si al algoritmilor ( KNN classifier, Support Vector Machine, FF Neural Networks, Random Forest, CNN).
* III. Proiectare, implementare si rezultate: prezentarea modalitatilor alese (setul de date GTZAN, spectrograma MEL si a. Feature extraction cu CNN si invatare automata cu SVM respectiv b. Random Forest), descrierea detaliata a fiecarui pas si etapa din cele doua abordari, mentionand doar o data cele comune (preprocesarea datelor de intrare). Pentru CNN+SVM si RF se prezinta rezultatele obtinute de la antrenare.  
  Dupa acesta se compara rezultatele obtinute atat din testare cu secvente muzicale din setul de date cat si unele noi, obtinute din piese de pe internet.
* IV. Concluzii: Descrierea din nou a tematicii, a problemei, a solutiilor propuse si a diferentelor dintre ele, a implementarii si a rezultatelor, subliniind cele din urma si tragand concluzii fata de care varianta poate fi considerata optima, de ce, si cum s-ar putea imbunatati.