



UNIUNEA EUROPEANĂ



GUVERNUL ROMÂNIEI



Instrumente Structurale
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Platformă de e-learning și curriculum e-content pentru învățământul superior tehnic

AEACD

9. Algoritmi de binarizare pentru documente clasice

Algoritmi pentru documente clasice

- Problema principala a documentelor clasice este faptul ca sunt deteriorate
- Algoritmii generali vor functiona in anumite cazuri, insa sunt cazuri in care acestia esueaza
- Sunt necesari algoritmi noi care produc o imagine intermediara binarizarii:
 - Marirea contrastului
 - Gaussian Blur
 - Resampling

Algoritmi pentru documente clasice

- Algoritmul de marire a contrastului incearca sa rezolve problema contrastului scazut al background-ului pentru a gasi culoarea predominanta din acesta
- Aceste probleme pot aparea din cauza degradarii documentelor sau a erorilor de scanare
- Scopul algoritmului este de a pune in evidenta diferentele de contrast prin doua iteratii
- Intai se calculeaza limitele domeniului de contrast prin aplicarea unui prag orizontal pe histograma de intensitati
- In cazul imaginilor grayscale, histograma este calculata pe baza frecventelor fiecarui pixel

Algoritmi pentru documente clasice

- Marginile celui mai lung segment orizontal ce taie histograma la nivelul de prag sunt folosite ca referinte pentru extinderea contrastului
- In final diferite valori de contrast sunt eliminate, iar celelalte valori sunt extinse pe lungimea intervalului initial, evidentiind diferentele dintre background si foreground
- Algoritmul nu obtine o imagine alb-negru, scopul lui este acela de a imbunatati imaginea grayscale in vederea aplicarii unui alt algoritm de binarizare

Algoritmi pentru documente clasice

CHAPTER VI.

My situation in Philadelphia was now so disagreeable, and my disgust and indignation were so great, that I determined to quit the country. My real friend, Mr. Croft, was absent all this time from town. I am sure if he had been at home, he would have done me justice; for, though he never liked me, he was a just, slow-judging man, who would not have been run away with by the hurry of popular prejudice. I had other reasons for regretting his absence—I could not conveniently quit America without money, and he was the only person to whom I could or would apply for assistance.

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Algoritmi pentru documente clasice

- Putem de asemenea imbunatati imaginea binara obtinuta fie folosind un gaussian blur fie prin resampling
- Procesul de resampling presupune micșorarea dimensiunii imaginii (a numărului de pixeli) prin aplicarea unui anumit filtru și readucerea ei la dimensiunile initiale prin aplicarea aceluiași filtru invers
- În acest fel se obține un efect asemănător celui de blur într-un timp mai rapid

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