

Tema 2 - MN

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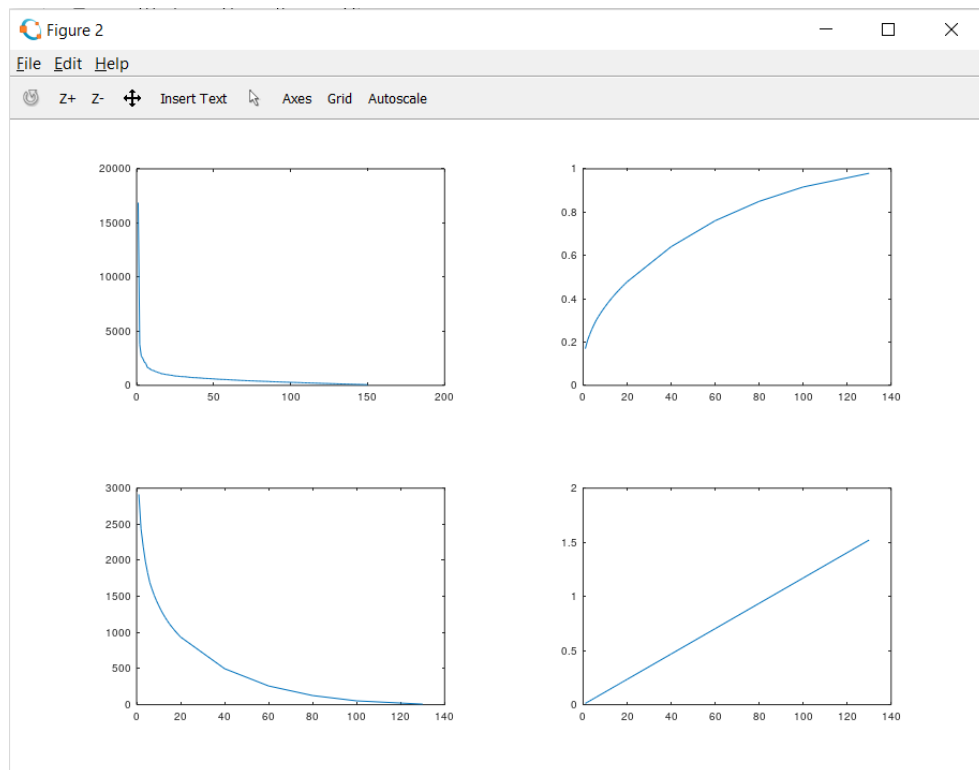
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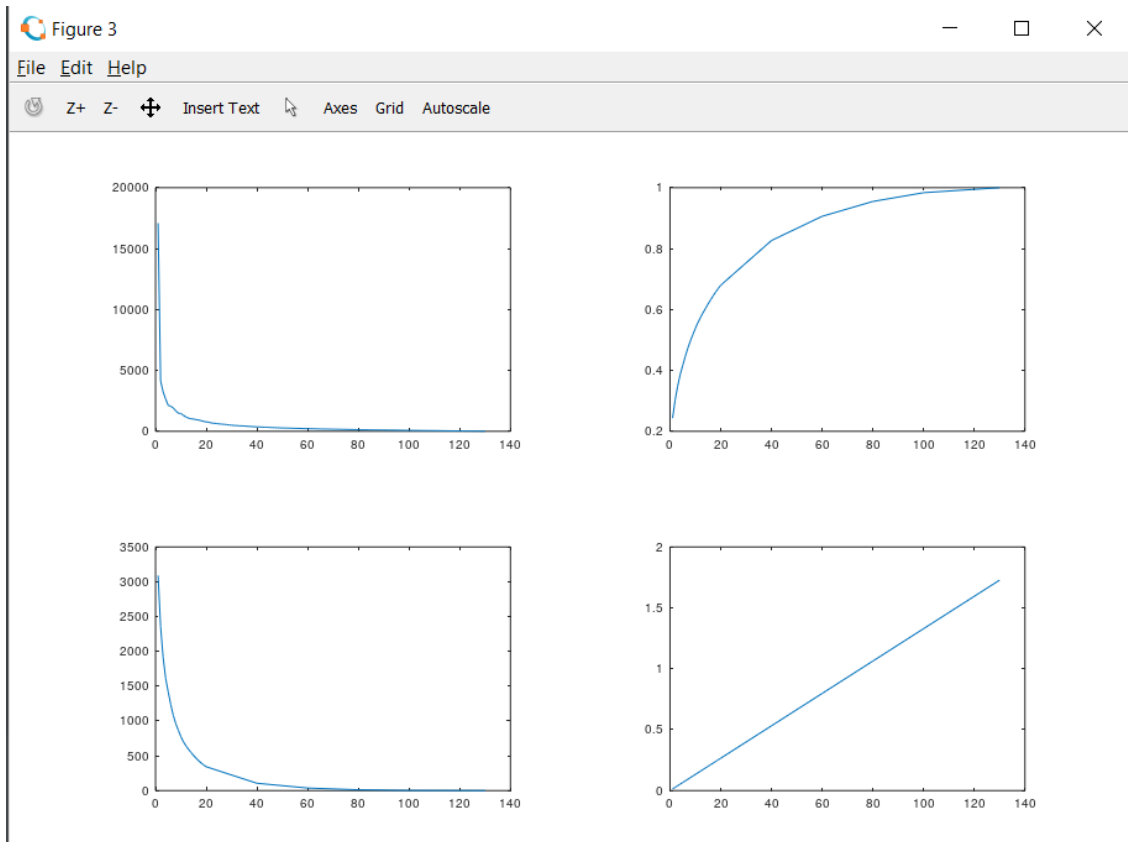
Task 1

Pentru rezolvarea cerintei am folosit functia `svd` existenta in Octave.

Task 2

Pentru reprezentarea grafica am ales valorile pentru abscisa date ca exemplu in enunt, am impartit figura in 4 subploturi si am implementat formulele din enuntul temei pentru a determina $f(k)$, dupa care am trasat graficele. Atasez graficele pentru imaginile 2 si 3.





Task 3

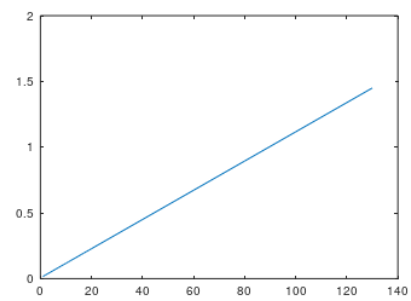
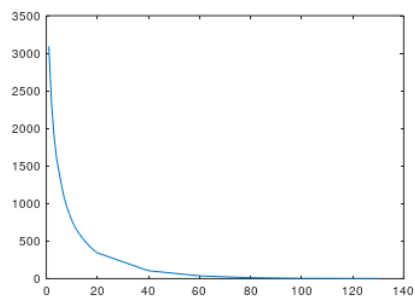
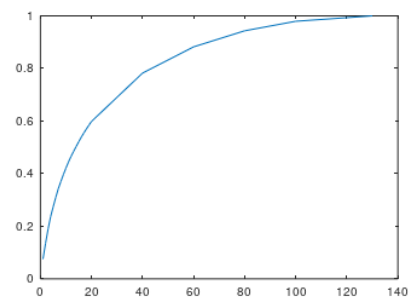
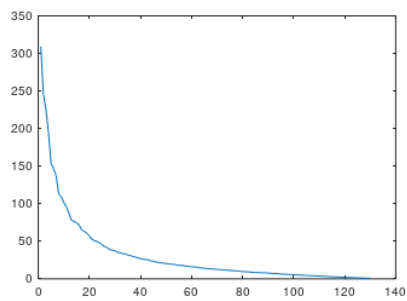
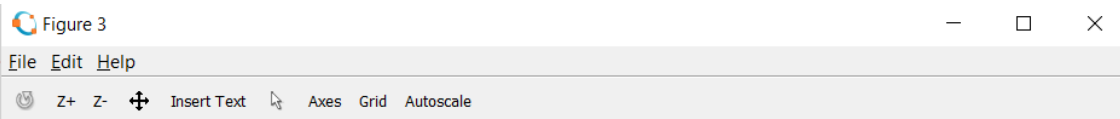
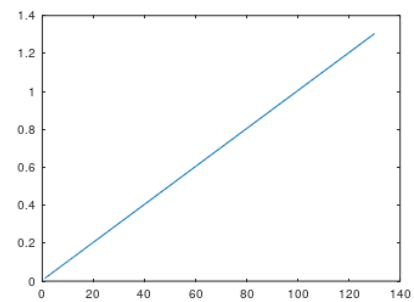
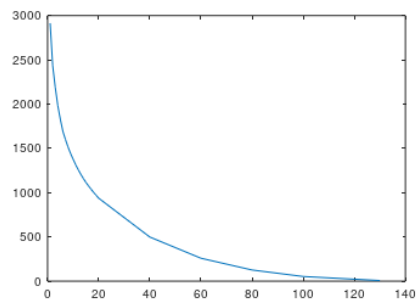
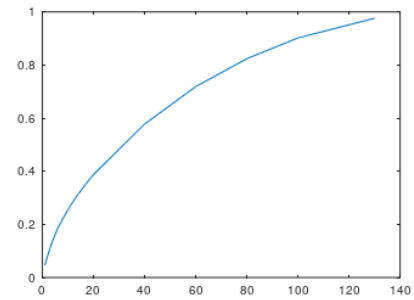
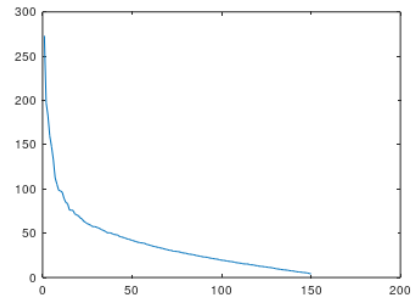
Am calculat componentele principale folosind svd, conform algoritmului descris in enunt.

Task 4

Similar cerintei 3, doar ca in loc de svd am folosit matricea de covarianta.

Task 5

La fel ca la cerinta 2. Atasez din nou graficele pentru imaginile 2 si 3.



Task 6

In functia `eigenfaces_core` calculez valorile proprii ale fetelor din setul de date, iar in functia `face_recognition` citesc o imagine si caut distanta minima dintre proiectia sa pe spatiul fetelor si proiectiile calculate in functia anterioara.