Povzetek

V diplomski nalogi sem se posvetil nekaterim podproblemom na področju prepoznavanja vzorcev. Najprej sem se posvetil definiciji oblike, merilom podobnosti ter osnovam fraktalnih oblik, katerih deli so enaki celoti. Zatem sem podal nekaj idej v zvezi s primerjanjem nizov, konveksnostjo poligonov in prepoznavanjem vzorcev. Nadaljeval sem z urejenostjo na ravnini - kako učinkovito preiskovati okolice. V ta namen sem izbral štiriška drevesa, v katerih so shranjene točke in daljice. Takšna urejenost je nujna, da lahko hitro preverimo hipoteze. Implementiral sem tudi algoritem za filtriranje in primerjanje oblik in ga preizkusil na nekaj primerih.

Math. Subj. Clas. (2000): 28A78, 28A75, 28A80, 52-04, 62H30, 62H38, 68P05, 68T10.

Ključne besede: Oblika, fraktali, poligoni, podobnost - različnost, primerjanje nizov, konveksnost, štiriška drevesa.

Key words: Shape, fractals, polygons, similarity - dissimilarity, string comparison, convexity, quadtrees.

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