An Application using the Initial Coefficients of Some Classes of Analytic Functions

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Abstract:

Geometric Function Theory (GFT) plays a central role in the development of complex analysis. Its field of study is the investigation of geometric properties of analytic functions. The investigation of univalent functions is one of the fundamental ideas of GFT. The theory of univalent functions is concerned primarily with relations between analytic structure and geometric behavior. In GFT, so far, various researchers have studied the geometrical properties of various subclasses of analytic functions, whereas only a few have studied the application of Geometric function theory in image processing. Thus, the goal of this study is to create an application for images using the initial coefficients of some classes of analytic functions. Since development in computer technology and imaging is increasing rapidly, our work can be applied in various areas of image processing including image restoration, sharpening, edge detection and gamma correction.