

## ***ABSTRACT***

*The manipulation of digital images has become commonplace for many people today. For example is image manipulation techniques: duplicated region, that aims to duplicate or cover an objects in the image. Followed by the increasingly sophisticated image processing applications, it is possible to manipulate an image with a very neat manipulation.*

*In this final project, the authors take the case of duplicated region on an image that categorized as photographic image. From that case, the author built the system to detect the presence or absence of duplicated region in an image. The system was built using Dense-Field technique based on the nearest-neighbor field (NNF) estimation algorithm called PatchMatch. This method based on a random area matching that allow system to detect the presence or absence of duplicated areas by the type of manipulation like copy-move manipulation or copy-paste manipulation.*

**Keywords:** *Manipulation, duplicated region, PatchMatch, Dense-Field, nearest-neighbor.*