

# Detecting Lens Flares and Blurry Images

Ainharan Subramaniam

**Abstract**—The short abstract (50-80 words) is intended to give the reader an overview of the work.

## I. INTRODUCTION

**D**ETECTION of anomalies in image data sets due to environmental factors is important to prevent analysis of corrupt data during field inspections. This report will explore different supervised learning methods of classification such as support vector machines (SVM) and  $K$ -nearest neighbors (KNN).

## II. OVERVIEW

The presentation's content is summarized in the report in 4 pages. The author should fill, but not exceed, this space. The report should be a self-contained report, so that it can be understood without studying additional literature.

document discussing system overview, outline of algorithm, intuition behind algorithm, summary of results, and potential future work you'd do here if you had more time.

## III. SVM vs KNN

The report can be written in  $\text{\LaTeX}$  or Microsoft Word, but  $\text{\LaTeX}$  is definitely preferred. Its appearance should be as close to this document as possible to achieve consistency in the proceedings.

References should be cited as numbers, and should be ordered by their appearance (example: "... as shown in [1], ..."). Only references that are actually cited can be listed in the references section. The references' format should be evident from the examples in this text.

References should be of academic character and should be published and accessible. Your advisor can answer your questions regarding literature research. You must cite all used sources. Examples of good references include text books and scientific journals or conference proceedings. If possible, citing internet pages should be avoided. In particular, Wikipedia is *not* an appropriate reference in academic reports. Avoiding references in languages other than English is recommended.

Figures and tables should be labeled and numbered, such as in Table I and Fig. 1.

TABLE I  
SIMULATION PARAMETERS

Information message length	$k = 16000$ bit
Radio segment size	$b = 160$ bit
Rate of component codes	$R_{cc} = 1/3$
Polynomial of component encoders	$[1, 33/37, 25/37]_8$

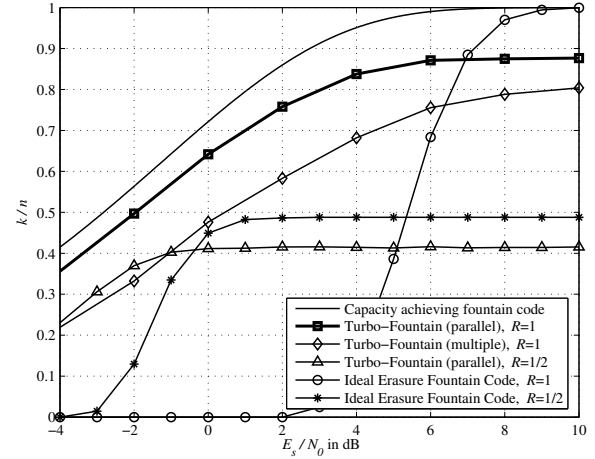


Fig. 1. Simulation results on the AWGN channel. Average throughput  $k/n$  vs  $E_s/N_0$ .

## IV. FUTURE WORK

Gallia est omnis divisa in partes tres, quarum unam incolunt Belgae, aliam Aquitani, tertiam qui ipsorum lingua Celtae, nostra Galli appellantur. Gallos ab Aquitanis Garumna flumen, a Belgis Matrona et Sequana dividit. Horum omnium fortissimi sunt Belgae, propterea quod a cultu atque humanitate provinciae longissime absunt, minimeque ad eos mercatores saepe commeant atque ea quae ad effeminandos animos pertinent important, proximique sunt Germanis, qui trans Rhenum incolunt, quibuscum continenter bellum gerunt. Qua de causa Helvetii quoque reliquos Gallos virtute praecedunt, quod fere cotidianis proeliis cum Germanis contendunt, cum aut suis finibus eos prohibent aut ipsi in eorum finibus bellum gerunt. Eorum una, pars, quam Gallos obtinere dictum est, initium capit a flumine Rhodano, continetur Garumna flumine, Oceano, finibus Belgarum, attingit etiam ab Sequanis et Helvetiis flumen Rhenum, vergit ad septentriones. Belgae ab extremis Galliae finibus oriuntur, pertinent ad inferiorem partem fluminis Rheni, spectant in septentrionem et orientem solem.

## V. CONCLUSION

This section summarizes the paper.

## REFERENCES

- [1] J. Hagenauer, E. Offer, and L. Papke. Iterative decoding of binary block and convolutional codes. *IEEE Trans. Inform. Theory*, vol. 42, no. 2, pp. 429–445, Mar. 1996.
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- [3] J. G. Proakis. *Digital Communications*. McGraw-Hill Book Co., New York, USA, 3rd edition, 1995.
- [4] F. R. Kschischang. Giving a talk: Guidelines for the Preparation and Presentation of Technical Seminars. <http://www.comm.toronto.edu/frank/guide/guide.pdf>.
- [5] IEEE Transactions  $\LaTeX$  and Microsoft Word Style Files. <http://www.ieee.org/web/publications/authors/transjnl/index.html>