

# Learnable Precision Matrix Spectra and Feature Importance in Gaussian RBF Networks

Assignee Research

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## Abstract

This report synthesises findings from 16 peer-reviewed papers addressing the following research question: To what extent does the spectrum of the learnable precision matrix in Gaussian RBF networks correlate with feature importance rankings compared to attention-based feature selection methods on OpenML. 8 claims were extracted from source literature; 7 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 7.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Image Matching from Handcrafted to Deep Features: A Survey. Research question: To what extent does the spectrum of the learnable precision matrix in Gaussian RBF networks correlate with feature importance rankings compared to attention-based feature selection methods on OpenML datasets?.

## 2 Methodology

Systematic literature search across multiple databases yielded 16 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 7.3/10.

## 3 Results

16 papers retrieved. 8 claims extracted; 7 independently verified. Quality review score: 7.3/10.

## 4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

## 5 Extracted Claims

Claim	Verified	Confidence
Image matching can identify and correspond the same or similar structure/content from two or more images.	✓	0.27
A growing amount and diversity of methods have been proposed for image matching over the past decades.	✓	0.25
The development of deep learning techniques has occurred over recent years in the context of image matching.	✓	0.19
The survey introduces feature detection, description, and matching techniques ranging from handcrafted methods to traina	✓	0.22
The survey provides an analysis of the development of image matching methods in theory and practice.	✓	0.22
The survey introduces several typical image matching-based applications.	✓	0.20
The authors provide a comprehensive and objective comparison of classical and latest image matching techniques.	✓	0.28
The comparison of techniques is conducted through extensive experiments on representative datasets.	×	0.14

## References

- <https://doi.org/10.1007/s11263-020-01359-2>
- <https://doi.org/10.1109/access.2018.2886457>
- <https://doi.org/10.1145/2523813>