Does Domain Adaptation Have On Speech Recognition Accuracy In Xtreme-S When Models Are Trained On In-Domain Versus

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Abstract

This report synthesises findings from 15 peer-reviewed papers addressing the following research question: What impact does domain adaptation have on speech recognition accuracy in XTREME-S when models are trained on in-domain versus cross-domain datasets across multiple languages. 16 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.3/10. This report is a machine-generated literature synthesis and does not constitute original research.

1 Introduction

This paper examines: Multi-Representation Adaptation Network for Cross-domain Image Classification. Research question: What impact does domain adaptation have on speech recognition accuracy in XTREME-S when models are trained on in-domain versus cross-domain datasets across multiple languages?.

2 Methodology

Systematic literature search across multiple databases yielded 15 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.3/10.

3 Results

15 papers retrieved. 16 claims extracted; 0 independently verified. Quality review score: 3.3/10.

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
MRAN is evaluated against state-of-the-art domain adaptation methods on three datasets: ImageCLEF-DA, Office-31, and Off	×	0.09
ImageCLEF-DA is a benchmark dataset for ImageCLEF 2014 domain adaptation challenge, consisting of 600 images in each of	×	0.04
ImageCLEF-DA has 6 transfer tasks: I $\rightarrow$P, P $\rightarrow$I, I $\rightarrow$C, C $\rightarrow$I, C $\rightarrow$P, P $\rightarrow$C.	×	0.03
Office-31 is a benchmark for domain adaptation, comprising 4,110 images in 31 classes collected from three distinct doma	×	0.04
Office-31 has 6 transfer tasks: A $\rightarrow$W, D $\rightarrow$W, W $\rightarrow$D, A $\rightarrow$D, D $\rightarrow$A, W $\rightarrow$A.	×	0.03
Office-Home is a new dataset consisting of 15,588 images from 4 different domains: Artistic images (A), Clip Art (C), Pr	×	0.03
MRAN is compared with various competitors, including TCA, GFK, ResNet, DDC, DAN, D-CORAL, RevGrad, JAN, MADA, and CAN.	×	0.01
MRAN (CMMD) improves DAN by replacing the multiple MMD penalties in DAN by the CMMD penalty.	×	0.03
MRAN (IAM) improves ResNet by replacing the global average pooling layers by IAM.	×	0.03
MRAN (CMMD+IAM) uses IAM with CMMD as the adaptation loss.	×	0.08
MRAN (CMMD+IAM) achieves an average accuracy of 88.3% on ImageCLEF-DA.	×	0.03
MRAN (CMMD) achieves an average accuracy of 86.9% on ImageCLEF-DA.	×	0.02
MRAN (IAM) achieves an average accuracy of 83.0% on ImageCLEF-DA.	×	0.03
MRAN (CMMD+IAM) achieves an average accuracy of 78.3% on Office-31.	×	0.04
MRAN (CMMD) achieves an average accuracy of 76.1% on Office-31.	×	0.02
MRAN (IAM) achieves an average accuracy of 73.0% on Office-31.	×	0.03

References

- http://arxiv.org/abs/2203.10752v3
- http://arxiv.org/abs/2201.01002v1
- http://arxiv.org/abs/2505.18673v1