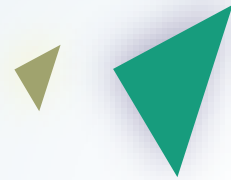




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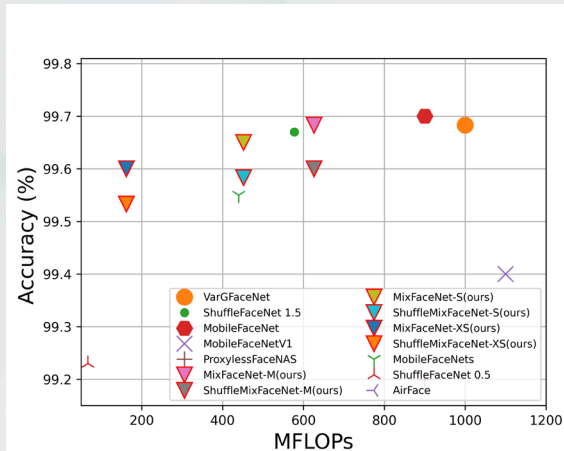


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Fang, Meiling (Fraunhofer IGD / TU Darmstadt GRIS)
Kirchbuchner, Florian (Fraunhofer IGD)
Kuijper, Arjan (Fraunhofer IGD / TU Darmstadt MAVC)

»MixFaceNets: Extremely Efficient Face Recognition, Networks«

In 2021 IEEE International Joint Conference on Biometrics (IJCB), pp. 1-8

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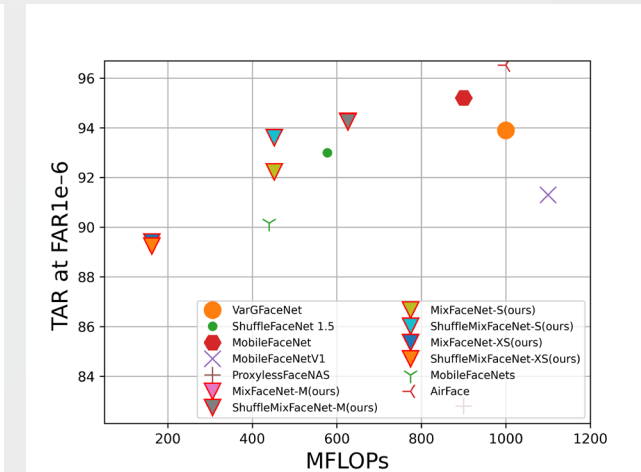
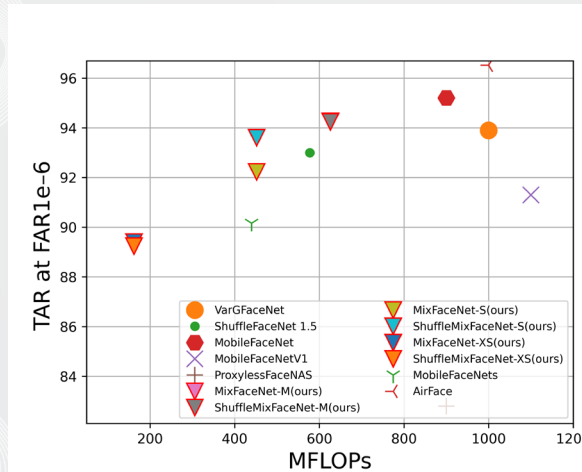
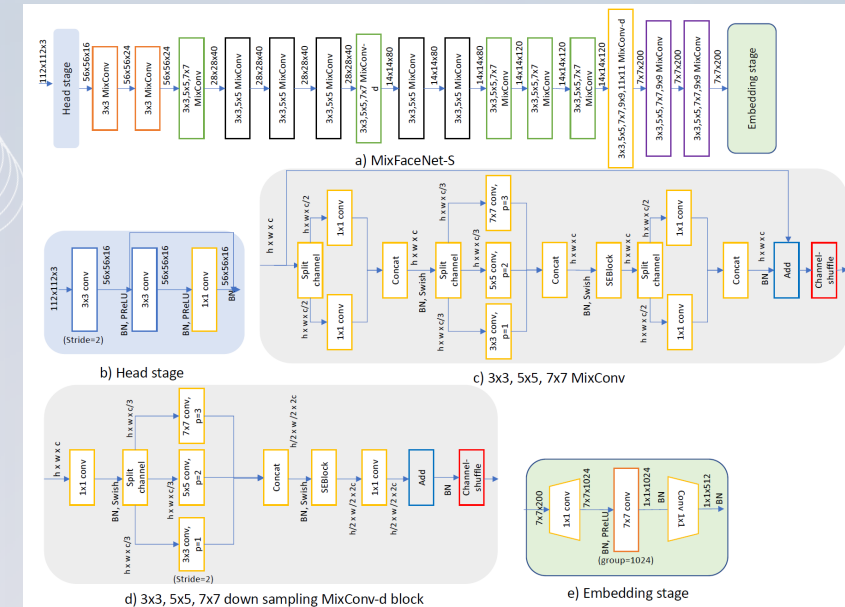
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PROBLEM

- Securely verifying a person's identity on edge devices without transmitting sensitive biometric data to the server requires lightweight deep learning models for these resource-constrained devices
- State of the art face recognition networks require high computational resources beyond the capabilities of many mobile and embedded applications



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RESULT

- The present a set of extremely efficient and high throughput models for accurate face verification.
- MixFaceNets achieved results comparable to the top-ranked models, while using significantly fewer FLOPs and less computation over-head



USP

- The growing demand for ML models that run on edge devices makes model optimization essential
- Any kind of efficiency gain reduces the large carbon footprint of data centers used to train and deploy ML models

