



RESEARCH TEAM

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IMPACT STORIES

Enhancing Identity Security: Authenticity Verification of Face Images

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Our current work focuses on the development of computer vision algorithms to verify the authenticity of face images and as a result combats illicit manipulations such as face morphing attacks that pose significant risk to face-identity systems. A key contributor to this effort is my postdoc, Guru Swaroop Bennabhaktula, whose expertise and dedication have been crucial in advancing our research and ensuring its practical applicability.

Our project is closely engaged with the Dutch Driving Authority (RDW) as our principal societal stakeholder. RDW plays an essential role in the Netherlands and across the European Union, responsible for the registration of motorized vehicles and the issuance of driving licenses. Importantly, in the Netherlands, a driving license is not just a permit to drive; it is an official identity document, recognized for identification purposes across various domains, making RDW's role critical for national security. RDW's involvement has been integral from the project's conception through to implementation and the exploration of research outcomes' potential applications. Their expertise in the challenges surrounding identity verification processes, combined with a commitment to improving security and efficiency in these systems, offered invaluable guidance. Bas Timmermans (RDW) has been a key player, securing funding from RDW and providing essential data, enabling us to move from concepts to a real-world application. Together with his colleague Kyra Bekman, we are engaged in a collaborative effort that aims to make a meaningful difference in enhancing security measures.

Achieved and Potential Impacts:

Our efforts lead to:

- *Enhanced Detection Techniques:* The development of algorithms capable of distinguishing genuine from morphed facial images, thereby strengthening the security of identity verification systems.
- *Contribution to National and EU Security:* By improving the reliability of identity documents like driving licenses, our project supports broader security initiatives, contributing to fraud prevention.

Reach and Significance:

- *National and EU-Wide Relevance:* Our collaboration with the RDW not only impacts the Netherlands but also sets a precedent for EU-wide security standards in identity verification.
- *Public Trust:* By addressing vulnerabilities in identity documents, our project directly contributes to enhancing public trust in digital and governmental processes.

"We are excited that our research project, in collaboration with RDW, has a direct societal impact by enhancing identity security and personal privacy, thereby contributing to national and EU-wide security initiatives."

