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Title – Simulated Eye-Tracking Data

Summary

Simulated eye-tracking data facilitate the rapid, repeated, and independent evaluation of eye-tracking methods without requiring resource-intensive user studies. This dissertation investigated whether increasing the eye model complexity and parameter variations used to generate simulated data can improve real-world eye-tracking outcomes.

The findings demonstrate that using an eye model that includes an aspheric anterior corneal surface and realistic variations in the asphericity of the anterior corneal surface in a simulated eye-tracking environment will improve the predictive power of the simulated data, which in turn will likely lead to the development of eye-tracking methods with better outcomes.