Transparent Phones: Data Privacy Risks in Social Media

This project aims to investigate to what extent popular social media applications collect, store, and share users' personal data, typically more than users actively consent to. I intend to investigate common data privacy risks, examine app permissions and data sharing with third parties, study user awareness of the risks, and determine user readiness to enhance data security. Lastly, I want to detail how developers, policymakers, and users can reduce privacy vulnerabilities and enhance data protection on mainstream platforms.

Social networking websites are now a part of modern life, connecting billions of users worldwide. This connectedness comes at a cost: vast amounts of personal data are mined and resold on a daily basis. Breaches, third-party access without permission, and vague privacy statements have shown that users often have neither control nor insight into what is being done with their data.

Research reports that many popular apps request excessive permissions and share data with various advertisers and analytics companies. However, typical users rarely read lengthy privacy policies or alter default settings. The mismatch between data practices and user understanding can result in serious harm, including identity theft, targeted misinformation, and undermined digital autonomy.

My project will build upon foundations in data ethics and privacy engineering. I plan to draw upon the theory of "informed consent" in online environments and privacy-by-design approaches to app development. By integrating policy analysis, technical examination of app permissions, and user awareness survey, I aim to make applied contributions for both users and developers. The significance of the study lies in facilitating users to protect themselves and fostering more transparent, privacy-conscious app design a critical goal in an era of growing digital surveillance.

In the first week, I will review existing research on digital privacy, app permissions, and privacy-by-design frameworks. In week 2 and 3, I will choose 5-7 popular social media apps (e.g., Instagram, TikTok, Facebook, Snapchat, X) for analysis. In weeks 4 and 5, I will examine what personal data each app requests, how that data is shared, and with whom. In weeks 6 and 7, I will design and conduct an anonymous online survey to assess user awareness and attitudes about data privacy on these apps. In weeks 8 through 10, I will

compare the technical findings with survey results to identify mismatches between what apps do and what users expect.
Then in weeks 11 and 12, I will develop recommendations for app developers and users, write the final report, and prepare materials for a poster presentation.

This project will need IRB approval because it involves conducting surveys in order to collect data. The total funding that I would need for this project would be about $310.

-$100: for survey platform subscription
-$80: Printing poster for presentation
-$150: Incentives for survey participants

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