Identifying Characteristics of Parental Control Apps

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MOTIVATIONS

• This research focuses on identifying, examining, and analyzing the characteristics and permissions of mobile parental control apps, as well as investigating the methods to search parental control apps.
• This research will provide valuable insights into the parental control app market and help us identify trends and patterns in parental control app usage.
• This research contribute to the development of more effective and secure parental control apps that can help safeguard children’s online activities.

WHAT ARE PARENTAL CONTROL APPS?

• Parental control apps: software application that enable parents to monitor and manage their children’s online activities
• Provided functions: content filtering, screen time management, location tracking, remote device locking
• Parental control apps help parent protect their children online, set good screen time habits, and keep track of children’s digital life.

METHODS

We analyze the search process and characteristics of the parent control app using technical methods such as machine learning and natural language processing.

App Scraping API
- google-play-scraper: APIs for crawl the Google Play Store for Python without any external dependencies
- Serpapi: Real-time API to access Google search results

Search Terms
We found basic research terms by referring to previous studies. Based on these terms, we found related terms using the “suggest” method of the google-play-scraper API.
[parental controls, child monitoring, online safety, family safety, child safety, child online safety, parental monitoring, family safety plan, screen time for kids, child safety kit]

Similar Apps
We extracted similar apps for each search terms using “similar” method of google-play-scraper. Among the 7761 apps collected, 101 apps including keywords related to parental control in their description were extracted.

Collected Data
App name, App description, App permission, Controlled functions

EARLY RESULTS

Permission
- Apps requesting permission to Photos/Media/Files on mobile phones were the most common, followed by Storage access rights and Wi-fi connection information.

Category
- Apps in the parenting category were the most common, followed by Lifestyle and tools.
- Apps in the three categories of parenting, lifestyle, and tools accounted for 72% of the total.