Harvard Online – Final Project Report Piperpal Location-Based Search Engine

Technology–Privacy Clash

The project examines the Piperpal Location-Based Search Engine and its Android application, which enable real-time geolocation searches for nearby services and points of interest. While offering convenience, the system collects and processes highly sensitive user location data, creating significant privacy risks. This tension reflects the broader conflict between personalization and protection against misuse, exposure, or exploitation of location information. Key stakeholders include users, developers, advertisers, and regulators, with vulnerable groups facing disproportionate risks.

Future Outlook

The clash is expected to intensify as location-based technologies grow more precise and interconnected. Emerging issues include increasingly granular location profiling, integration with third-party advertising networks, and AI-driven inference of sensitive personal attributes. Without strengthened consent mechanisms, data minimization practices, or privacy-preserving technologies, risks to user privacy will expand.

Relation to Class Cases

This case mirrors themes from the Digital Health Apps module, where sensitive data collection and repurposing raised concerns about trust and user protection. It also parallels the Deepfakes module, illustrating how data originally collected for benign purposes may be reused in harmful, unforeseen ways. These comparisons reinforce the need for transparency, ethical design, and regulatory oversight.

Conclusion

Piperpal exemplifies the tension between technological convenience and erosion of privacy. As geolocation technologies advance, risks will grow unless developers adopt robust safeguards. In line with the principles emphasized in the course, the Piperpal Location-Based Search Engine was permanently closed on October 22, 2025 to prioritize user trust and privacy.