

Comparison of Privacy Preserving Tools in Web Browsers and Extensions

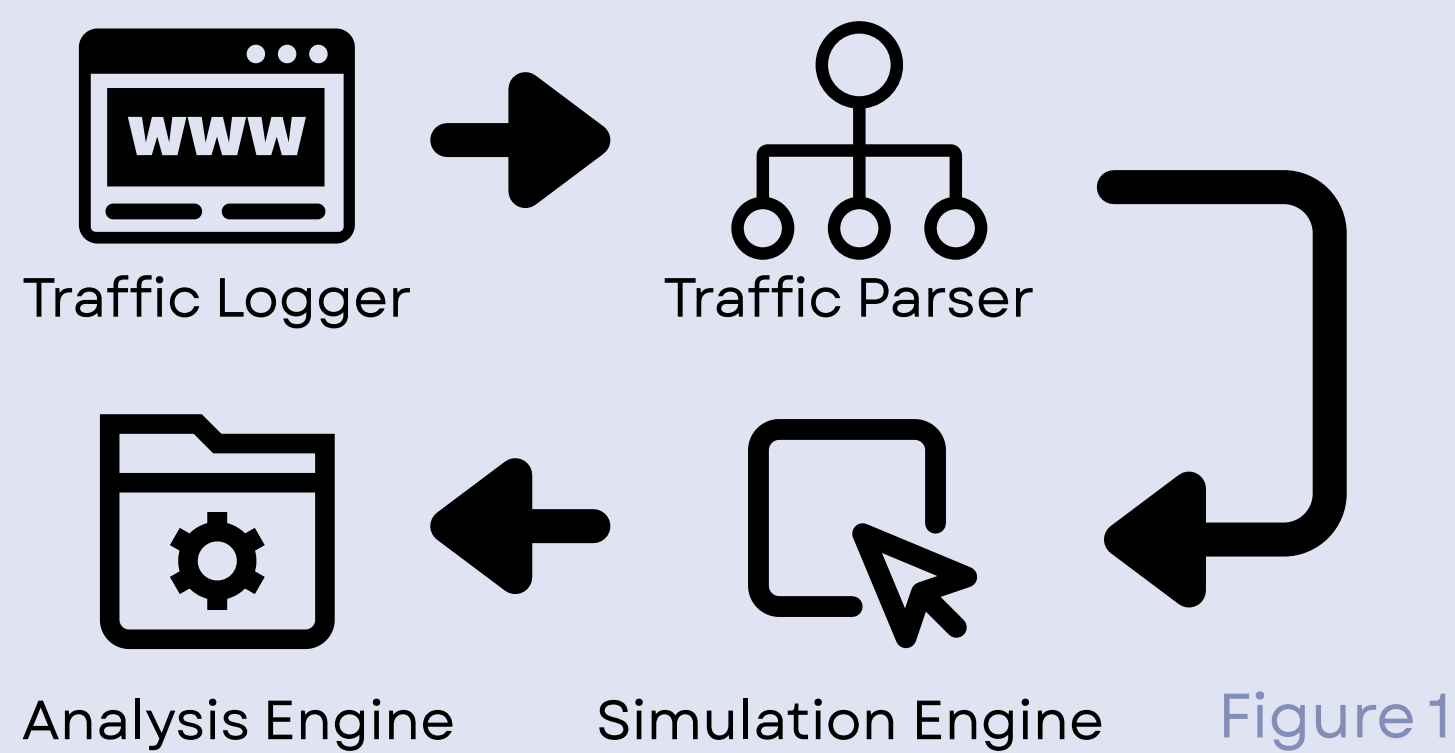
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Introduction

- Over 90 % websites include trackers [1]
- Privacy-conscious users use content blockers
- Which one is the best? Which one to choose?

Methodology



Deterministic evaluation allows for a fair comparison

Request Tree with Fingerprinting Attempts

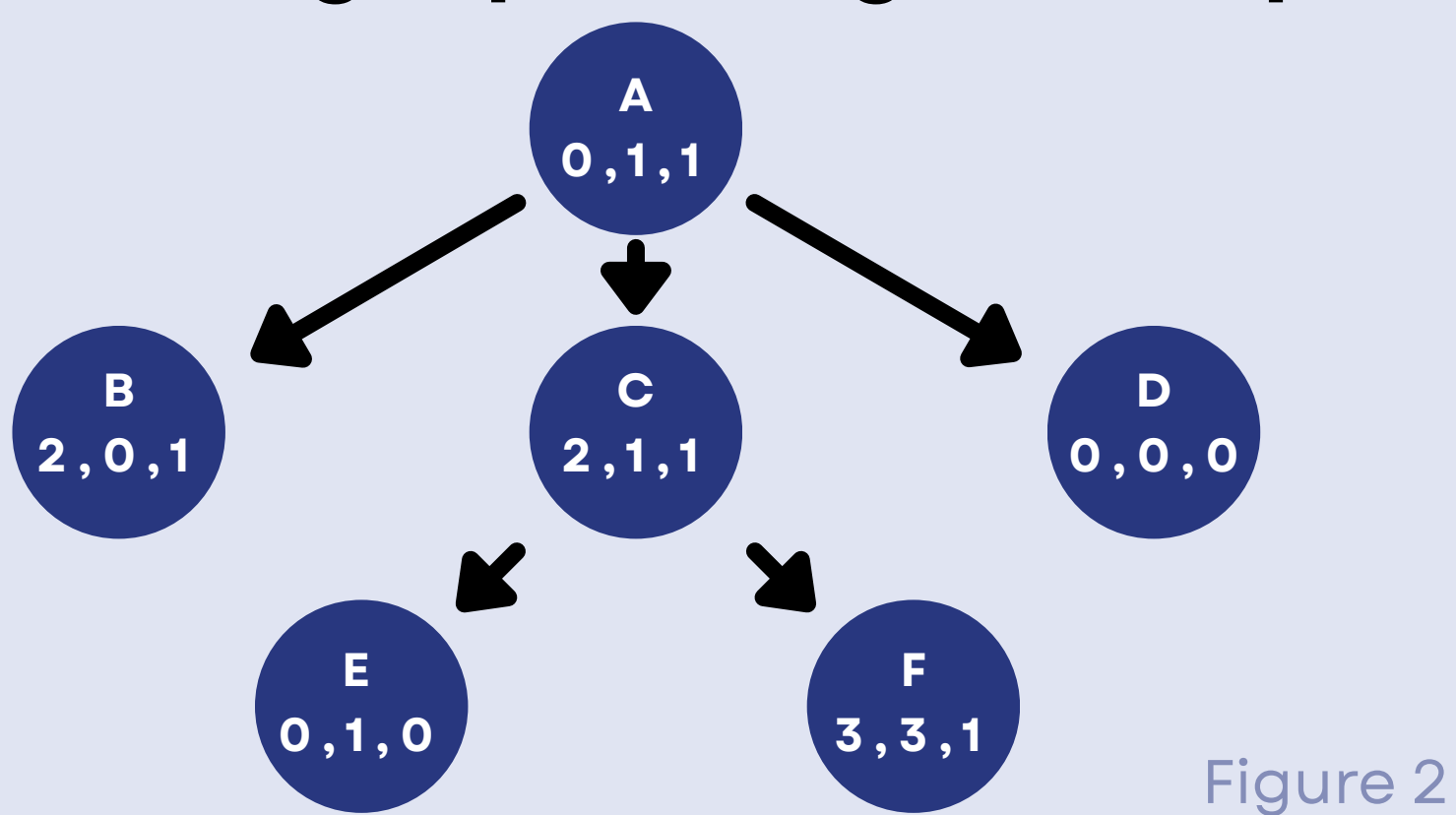


Figure 2

Insights

- Tree-based request modeling helps test side-effects of request blocking
- Tools highly differ in number of blocked requests
- Extensions behave differently in Firefox and Chrome

Blocked Network Requests

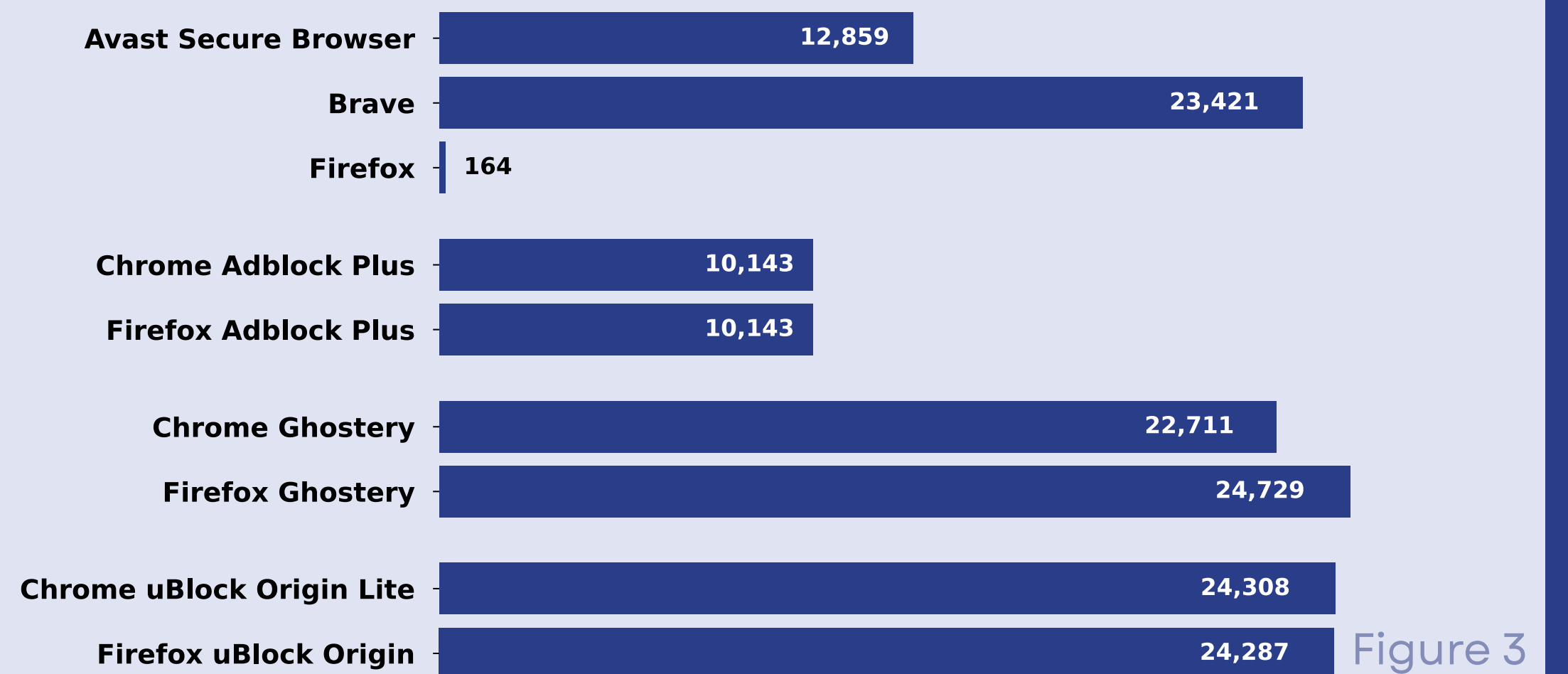


Figure 3

Prevented Fingerprinting API Calls of Browser Properties

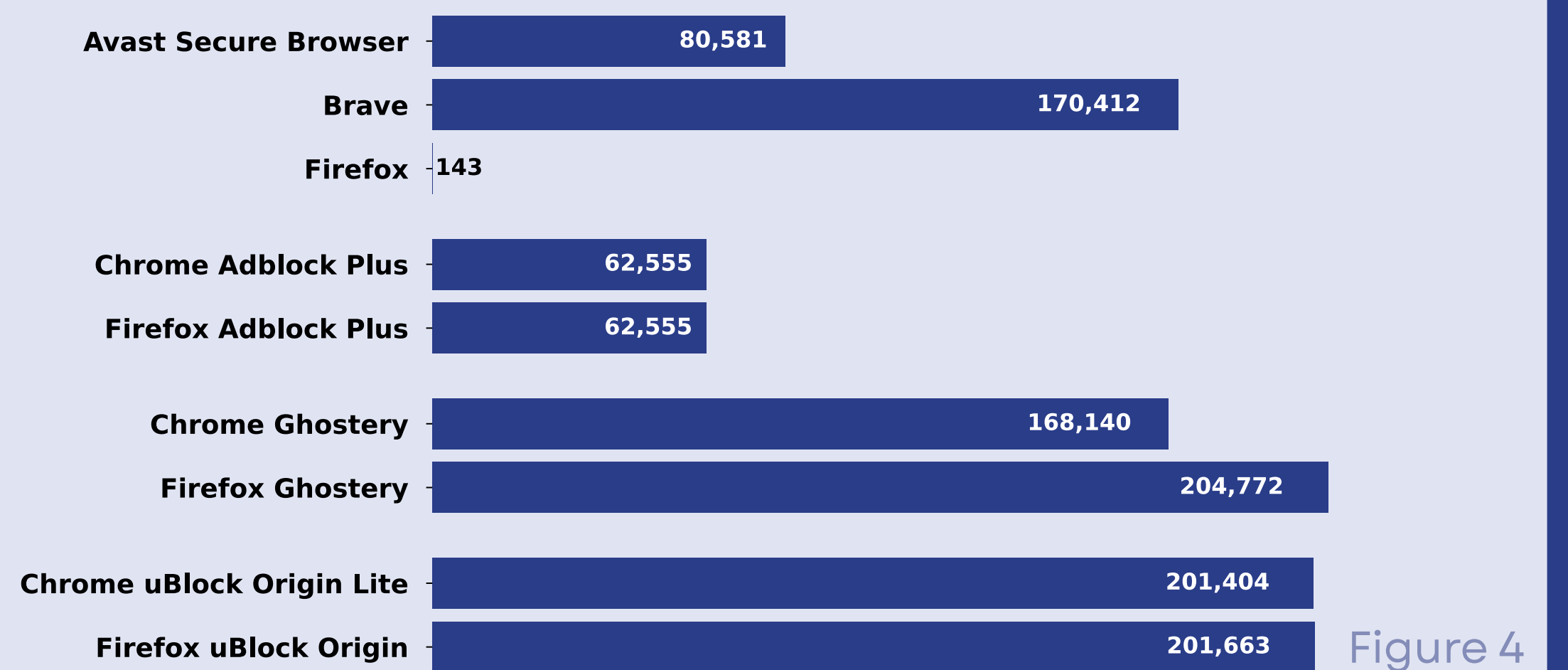


Figure 4

Prevented Fingerprinting API Calls of Algorithmic Methods

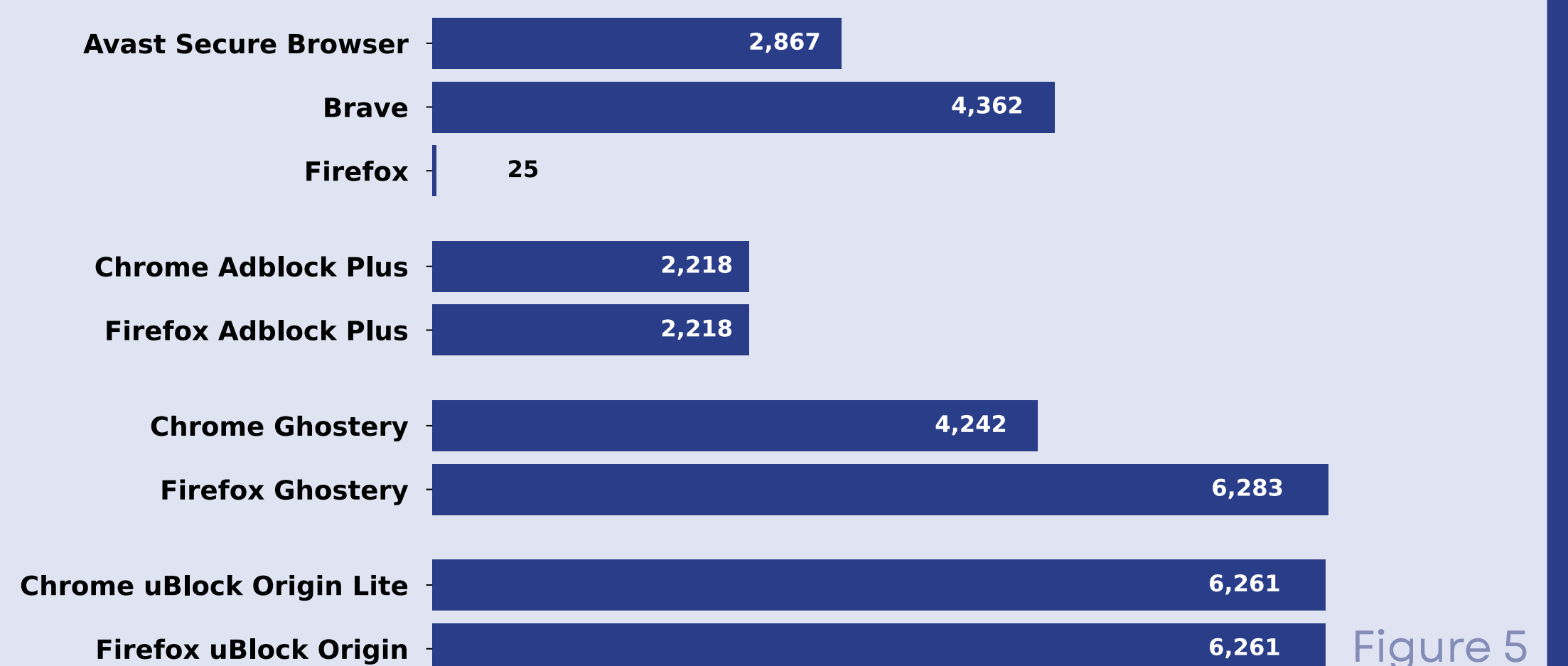


Figure 5

[1] Dambra, S.; Sanchez Rola, I.; Bilge, L. and Balzarotti, D. When Sally Met Trackers: Web Tracking From the Users' Perspective. In: 31st USENIX Security Symposium (USENIX Security 22). Boston, MA: USENIX Association, August 2022, p. 2189–2206. ISBN 978-1-939133-31-1.