

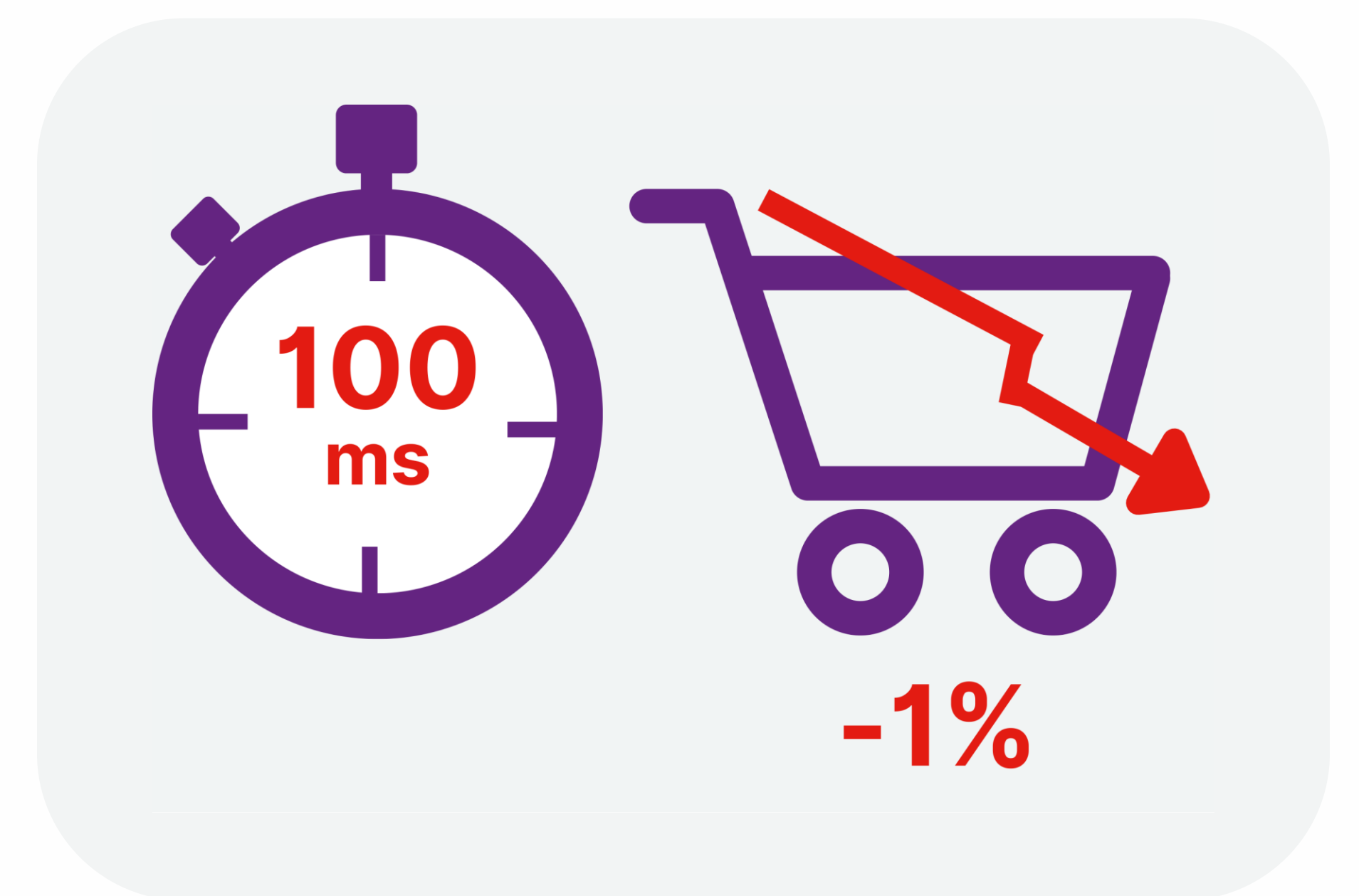


Optimising Server-Side Performance with IBM Instana & AI

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1 Background

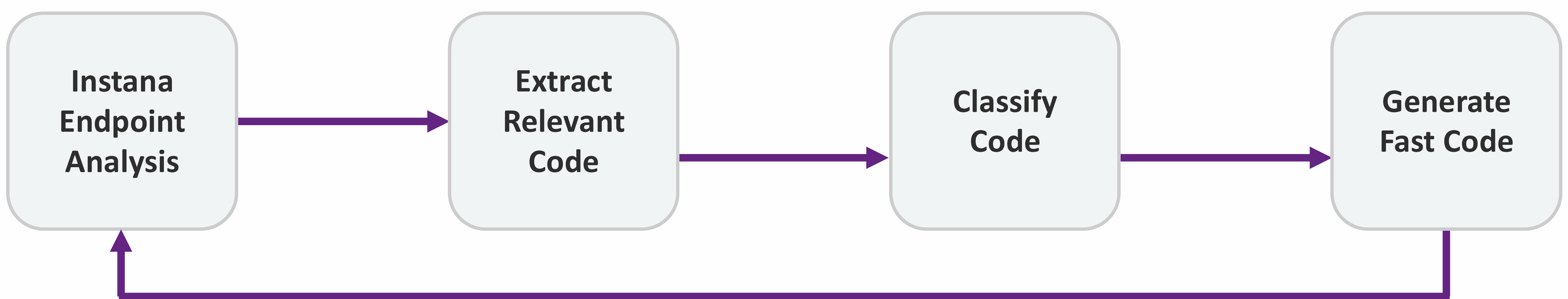
- Amazon lost 1% in global sales per 100 milliseconds in delay.¹
- Goldman Sachs invested over \$100 million to make their stock trades faster.²
- As software grows more complex, outdated performance tools struggle to keep up.



2 Question

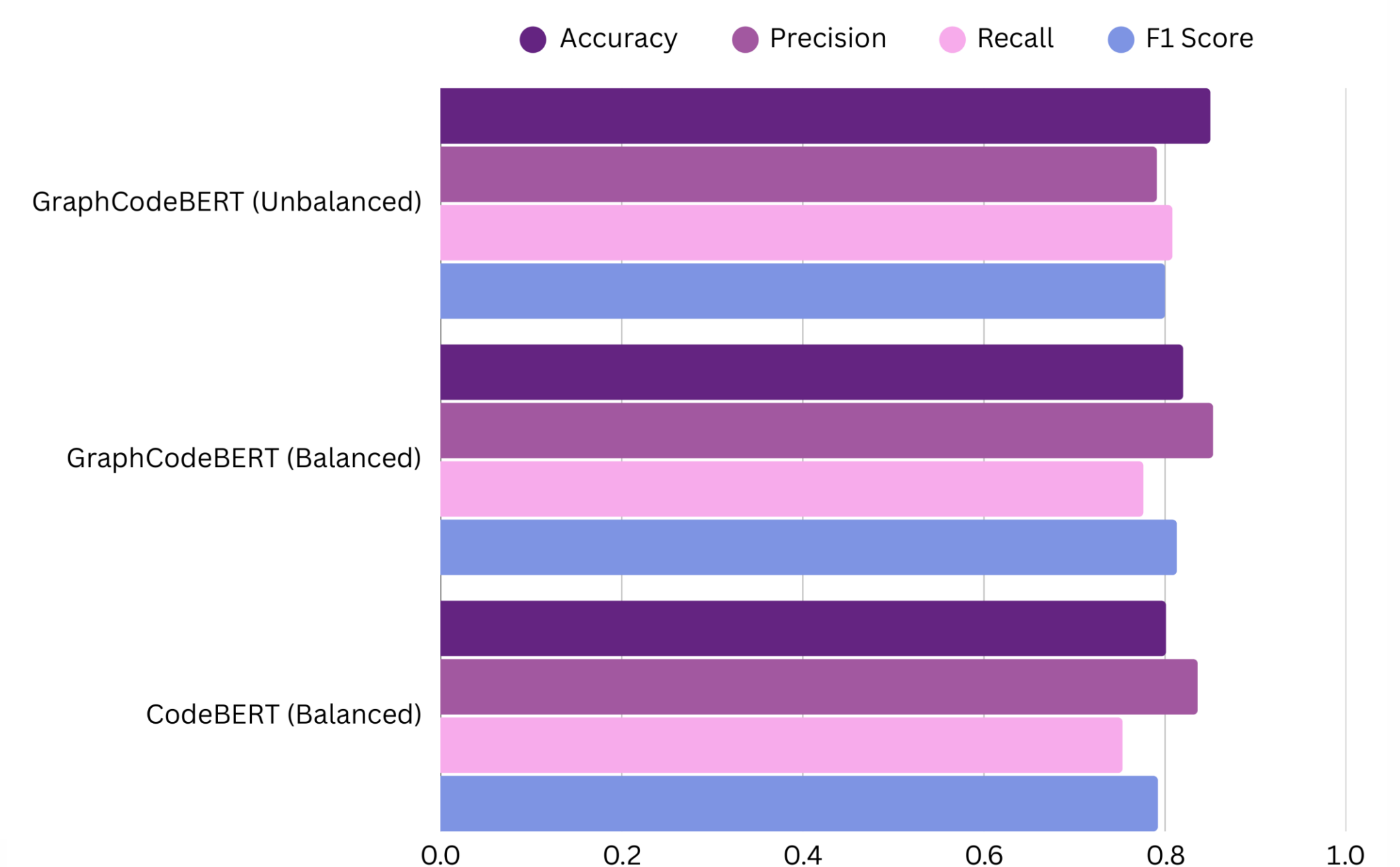
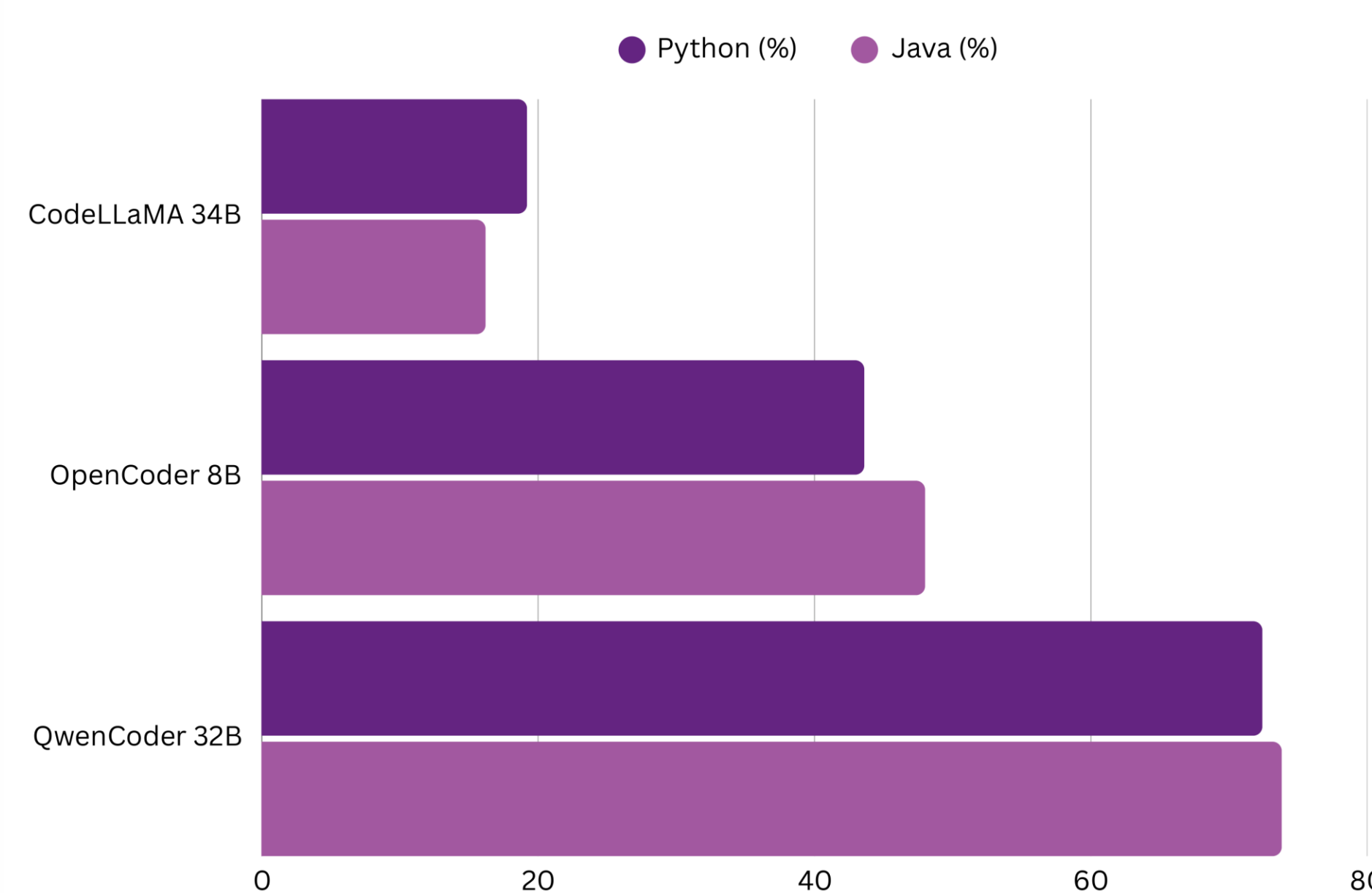
How can AI, in combination with IBM Instana, be used to detect and resolve performance bottlenecks?

3 Method



4 Results & Discussions

- Deep learning models like GraphCodeBERT reliably classify code based on performance.
- Generative AI models like QwenCoder excel at producing performant code.



1. Cheng Huang, David A. Maltz, Jin Li, and Albert Greenberg. Public DNS system and global traffic management. In 2011 Proceedings IEEE INFOCOM, pages 2615–2623, April 2011.
 2. Hugh Son. Goldman is spending \$100 million to shave milliseconds off stock trades. <https://www.cnbc.com/2019/08/01/goldman-spending-100-million-to-shave-milliseconds-off-stock-trades.html>, August 2019. Published and updated on August 1, 2019