

Lab 7: Research on Implementing an API, Plug-in, or Library

Research Into Server Scoping: Pinterest

The focus of this research assignment will be on the Pinterest website, which I personally use in almost every design project where I collaborate with my co-workers and/or with my clients. Pinterest is a wonderful tool to visually communicate with others quickly on how interiors (or anything really) could look – to get vibes, inspiration, and sync up on the potential visual direction for a space. This review will cover information about its general traffic levels, technology platform, and some range of what hosting might cost.

Approximate monthly users and visits:

According to Statista [1], Pinterest had 416 million monthly active users (MAUs) worldwide as of June 2023. Pinterest's internal data as of June 2023 [5] shows that hundreds of millions of people around the world come to Pinterest every month. Pinterest's Q2 2022 Shareholder Report [6] shows that the platform's average MAUs in the U.S. increased by 5% in 2022.

Technologies/platform site Pinterest is built/based on:

- According to StackShare [7], Pinterest's tech stack includes Python, Java, JavaScript, React, Redux, MySQL, Cassandra, Hadoop, Kafka, and Flink.
- Pinterest uses Amazon S3 and EC2 instances for storing information and running its Nginx web servers [8].
- Pinterest resources operate in a Docker infrastructure, an open platform [8].
- As listed on the Himalayas.app [9] the following tools and technologies are used by Pinterest: Python, Java, JavaScript, React, Redux, MySQL, Cassandra, Hadoop, Kafka, Flink, Docker, Amazon S3, Amazon EC2, and SendGrid.
- StackShare [10] also lists Python, Java, JavaScript, React, Redux, MySQL, Cassandra, Hadoop, Kafka, and Flink as part of Pinterest's tech stack.

The "rough" hosting cost ranges, and pros and cons between hosting through at least two of the following:

- Traditional shared-environment hosting:
According to HostGator [17], shared hosting plans for small websites can cost between \$3.75 and \$6.25 per month. Pros of shared hosting include low cost and ease of use. Cons include limited resources and potential security risks.
- Amazon Web Services (AWS):
According to the search results, Pinterest has committed to spending a whopping \$3.2 billion with AWS over the next eight years [14]. However, it is important to note, this is the minimum spend, and not a fixed fee. Pinterest is still billed based on usage but must hit at least \$3.2 billion total by 2030 [11]. AWS offers a free tier for new customers, and prices can range from a few cents to thousands of dollars per month depending on factors such as the type of instance, storage, and data transfer [12]. Pinterest uses AWS high-level services such as Rekognition, a machine learning service to annotate images with text [11]. Pinterest also tried self-hosted Elasticsearch but it cost them more money than AWS Elasticsearch [11]. The cost of hosting on AWS could be affected by variables such

as the size and complexity of the website, the amount of traffic it receives, the level of security required, and the type of hosting plan selected [11].

Some general variables that could affect the hosting cost:

- The cost of hosting can be affected by variables such as the size and complexity of the website, the amount of traffic its receiving, the level of security required, and the type of hosting plan chosen.

In summary, Pinterest.com has continued to grow in popularity worldwide, and I can see why – the platform is an amazing tool for visualization, planning, and collaborating. Cheers to more growth and development ahead. Please refer to these links listed below for the origin of research and data cited.

Citations:

[1] <https://www.statista.com/statistics/463353/pinterest-global-mau/>

[2] <https://www.similarweb.com/website/pinterest.com/>

[3] <https://investor.pinterestinc.com/press-releases/press-releases-details/2022/Pinterest-Announces-Fourth-Quarter-and-Full-Year-2021-Results/default.aspx>

[4] https://s23.q4cdn.com/958601754/files/doc_financials/2022/q4/54d139a9-71d2-481e-98c4-85f9e643ab8e.pdf

[5] <https://newsroom.pinterest.com/en/post/pinterest-investor-day-2023-growing-engagement-and-monetization>

[6] <https://blog.hootsuite.com/pinterest-statistics-for-business/>

Tech stack citations:

[7] <https://stackshare.io/stack-history/timeline-pinterest-tech-stack-evolution>

[8] <https://thetechnologyvault.com/pinterest-tech-stack>

[9] <https://himalayas.app/companies/pinterest/tech-stack>

[10] <https://stackshare.io/pinterest/pinterest>

AWS citations:

[11] <https://news.ycombinator.com/item?id=28286995>

[12] <https://www.cnbc.com/2019/03/22/pinterest-must-spend-at-least-750-million-on-aws-ipo-filing.html>

[13] <https://www.geekwire.com/2019/pinterest-cut-deal-amazon-web-services-requires-spend-750-million-cloud-leader-2023/>

[14] <https://www.theinformation.com/articles/how-pinterest-learned-to-control-cloud-costs>

[15] <https://www.computerworld.com/article/2503482/amazon-cloud-set-stage-for-fast-pinterest-growth.html>

[16] <http://highscalability.com/blog/2012/11/1/cost-analysis-tripadvisor-and-pinterest-costs-on-the-aws-clo.html>

[17] <https://www.hostgator.com/web-hosting2>