

Requirement Gathering and Analysis Phase Technology Stack (Architecture & Stack)

Date	27 July 2025
Team ID	LTVIP2025TMID47699
Project Name	Project - HouseHunt

Technical Architecture:

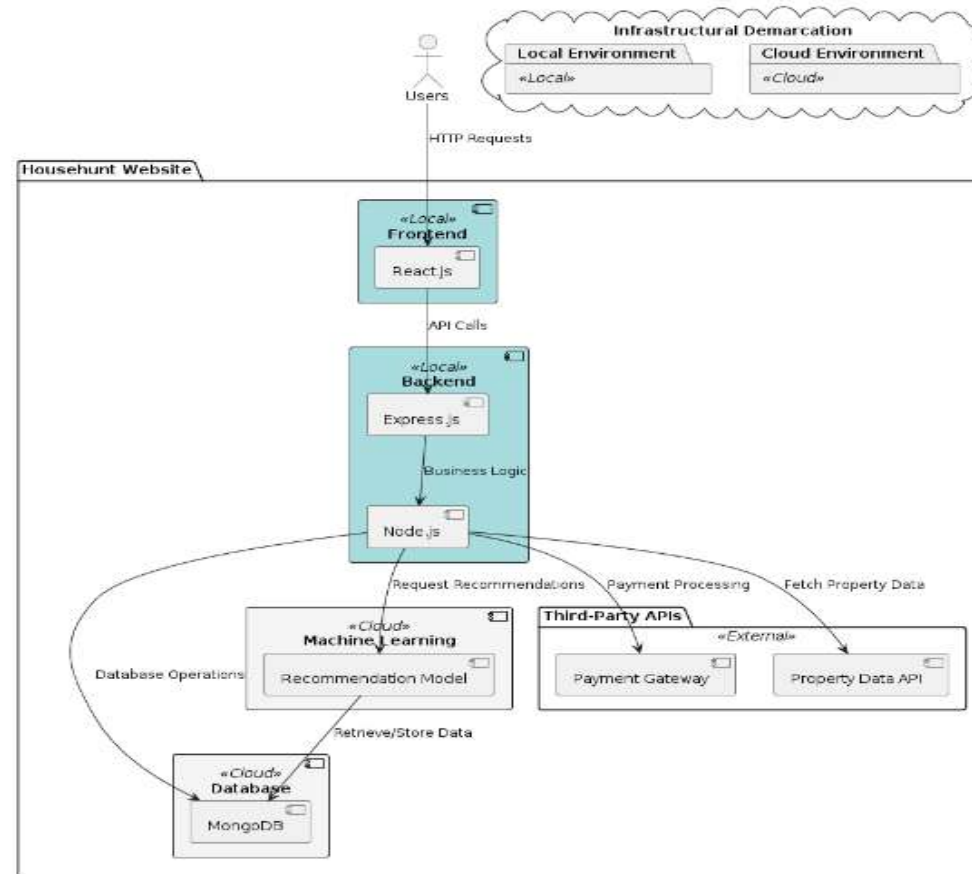


Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	Search and Filters	Search for properties by location, price range, and property type.	React, Node.js, Express, MongoDB
2.	User Accounts & Communication	Create an account with Gmail authentication and save searches.	React, Node.js, Express, MongoDB, OAuth
3.	User Accounts & Communication	Receive confirmation email upon registration.	React, Node.js, Express, MongoDB, Nodemailer
4.	Market Insights	View an indicator on listings of current and past price changes in the area.	React, Node.js, Express, MongoDB, Chart.js
5.	Environmental data	See an overlay on listings showing estimated noise levels and air quality.	React, Node.js, Express, MongoDB, AirVisual API
6.	Detailed Listings	View detailed listings with high-quality photos and videos.	React, Node.js, Express, MongoDB, AWS S3
7.	User Accounts & Communication	Contact sellers or landlords directly through the platform.	React, Node.js, Express, MongoDB, Socket.io
8.	Neighbourhood Insights	Gain insights into the surrounding neighbourhood, including schools, parks, and amenities.	React, Node.js, Express, MongoDB, Google Maps API.
9.	Community Rating, Reviews and Feedback	Read reviews from other users about neighbourhoods and property management companies.	React, Node.js, Express, MongoDB, Yelp API
10.	School district & commute overlays	Filter listings based on commute time to specific locations (work, school).	React, Node.js, Express, MongoDB, Google Distance Matrix API.
11.	Dashboard for sellers, agents and landlords	Host a live, interactive open house directly on the platform.	React, Node.js, Express, MongoDB, WebRTC
12.	Notifications	Receive notifications when new listings matching saved searches become available.	React, Node.js, Express, MongoDB, Firebase Cloud
13.	Security Considerations Enforcement	Deal only with legitimate and authorized individuals, ensuring property information is secure.	React, Node.js, Express, MongoDB, JWT

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	React, Node.js, Express, MongoDB, OAuth, Chart.js, AirVisual API, AWS S3, Socket.io, Google Maps API, Yelp API, Google Distance Matrix API, WebRTC, Firebase Cloud, JWT
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	JWT, OAuth, Nodemailer
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	React, Node.js, Express, MongoDB
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	React, Node.js, Express, MongoDB, Firebase Cloud
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	React, Node.js, Express, MongoDB, AWS S3