𝗨𝗯𝗲𝗿'𝘀 𝗔𝗿𝗰𝗵𝗶𝘁𝗲𝗰𝘁𝘂𝗿𝗲 𝗮𝘀 𝗮 𝗚𝗜𝗙  
  
🔷 𝗨𝗯𝗲𝗿'𝘀 𝗔𝗿𝗰𝗵𝗶𝘁𝗲𝗰𝘁𝘂𝗿𝗲: A powerhouse that processes millions of requests daily, constantly evolving for optimal user service.  
  
🔷 𝗞𝗲𝘆 𝗖𝗼𝗺𝗽𝗼𝗻𝗲𝗻𝘁𝘀: The familiar taxi app is supported by multifaceted tech that includes the Web Application Firewall (WAF), Load Balancer(LB), Kafka REST API, and Web Sockets.  
  
🔷 𝗥𝗶𝗱𝗲 𝗕𝗼𝗼𝗸𝗶𝗻𝗴 𝗣𝗿𝗼𝗰𝗲𝘀𝘀:  
  
1️⃣ User books a ride and the app forwards the request to the demand server.  
2️⃣ Demand server prompts the supply server for a nearby driver.  
3️⃣ Supply server uses Kafka REST API to fetch the latest driver location data.  
4️⃣ Demand server contacts the nearest driver. Once accepted, your ride is confirmed!  
  
🔷 𝗦𝗰𝗮𝗹𝗮𝗯𝗶𝗹𝗶𝘁𝘆 𝗮𝗻𝗱 𝗥𝗲𝗹𝗶𝗮𝗯𝗶𝗹𝗶𝘁𝘆: Uber's architecture is designed to handle heavy traffic and ensure a smooth ride, even when there are bumps along the way.  
  
🔷 𝗗𝗲𝗲𝗽 𝗗𝗶𝘃𝗲 𝗶𝗻𝘁𝗼 𝗞𝗲𝘆 𝗖𝗼𝗺𝗽𝗼𝗻𝗲𝗻𝘁𝘀:  
  
Web Application Firewall (WAF): A virtual shield that guards against malicious web traffic.  
  
Load Balancer: Manages web traffic across multiple servers for optimal performance.  
  
Kafka REST API: Consumes location data from drivers, acting as the system's nerve center.  
  
Web Sockets: Facilitates real-time communication between Uber's servers and users.  
  
Check out the animated diagram below to better understand Uber's tech machine.

