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# Byte Quest

Department of
CSE


BLOCKCHAIN AS SERVICE

NEXT GENERATION HOTSPOT

METAL DETECTING DRONES

BEHAVIOURAL BIOMETRICS

## *Department Vision*

*To be a center for academic excellence in the field of Computer Science and Engineering education to enable graduates to be ethical and competent professionals.*

## *Department Mission*

*To enable students to develop logic and problem solving approach that will help build their careers in the innovative field of computing and provide creative solutions for the benefit of society.*

### *FACULTY COORDINATORS*

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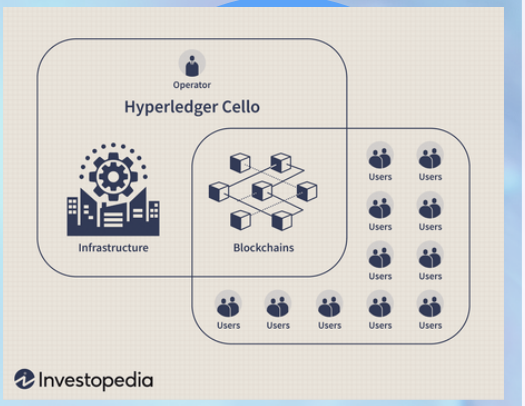
## BLOCKCHAIN-AS-A-SERVICE (BAAS)

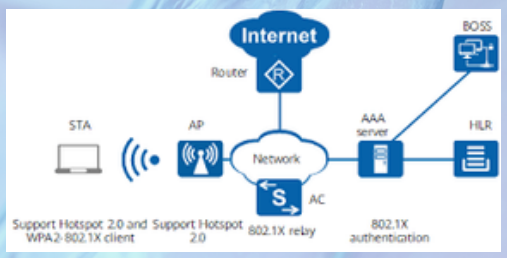
Blockchain-as-a-Service (BaaS) is a cloud-based infrastructure that allows the deployment and leverage of blockchain solutions. BaaS sets trends in blockchain technology by its practical usage. This technology simplifies the adoption of blockchain to businesses.
Any company can develop and deploy its blockchain application without managing complicated infrastructure. This makes the given application more available and adaptable, reducing resource consumption and bringing innovation. BaaS also allows businesses to select the most suitable blockchain protocol to meet their requirements.




BaaS is supposed to be one of the key blockchain trends in 2024. Technical giants like Microsoft and Amazon are already offering blockchain services. They work like web hosting providers and take care of infrastructure and maintenance.
Hyperledger Fabric by Amazon is such a provider, where the BaaS operator offers usual support activities for the users. It allows businesses to concentrate on their functions because there would be no need to create an entire blockchain environment from scratch.

## NEXT-GENERATION HOTSPOT (NGH)

Also known as Hotspot 2.0, NGH allows seamless and secure roaming across different wireless networks. “This is achieved through the use of the IEEE 802.11u standard, which enables devices to automatically discover and authenticate with Hotspot 2.0 networks,
There are currently several Hotspot 2.0 variants, including OpenRoaming, from the Wireless Broadband Alliance.




Hotspot 2.0 makes it easier to connect to wireless networks, eliminating the need to manually enter login credentials or configure device settings. Hotspot 2.0 technology could also replace current Wi-Fi roaming technologies, such as the WISPr protocol, which are less secure and don’t support automatic network discovery and authentication. “This will lead to a better user experience and increased adoption of wireless services,” Witkowski predicts.
Hotspot 2.0 also benefits cellular carriers, allowing them to offload data traffic from 4G and 5G services onto Wi-Fi networks. “This can help reduce congestion on the cellular network and improve the overall user experience,” Witkowski says.

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## MAGNETOMETER-EQUIPPED DRONES FOR METAL DETECTION.

Drone technology has come a long way in recent years, and one of the latest trends is the use of drones for treasure hunting.
One such product is the DroneRover by TreasureHunter3D, a 3D treasure detector sensor that can be attached to a drone like DJI Phantom or DJI Mavic 3 and turn DJI or any other drone into a drone metal detector.

With drone metal detectors, users can survey large areas quickly and efficiently, making it easier to locate buried treasure. DroneRover system can automatically scan an area for treasure up to a depth of 100ft/30m with the simple press of a button.
The DroneRover can detect metallic and non-metallic objects, including precious metals like gold, silver, and ancient bronze objects, as well as chests, boxes, hidden rooms, graves, tunnels or even shipwrecks.
It can be controlled using a smartphone or tablet by using the DroneRover app that allows users to mark the area they want to scan on a map, press the GO button to start scanning, and the drone will scan the area while they observe the results on their device.

The app also provides users with the ability to adjust the scan speed and resolution, select the survey area, and adjust the sensitivity of the detector sensors. Additionally, the app provides information on the drone battery status, altitude mode, and altitude selection. The DroneRover can be used in autopilot or manual mode. In autopilot mode, the DroneRover can scan an area completely by itself, while in manual mode, users can control the drone's movements using a remote controller.

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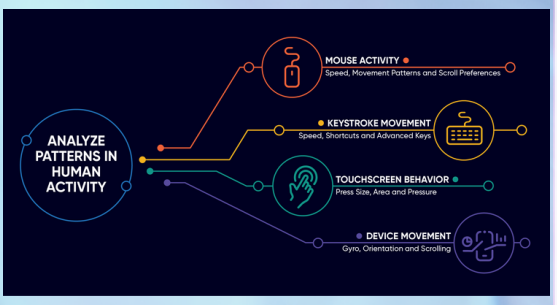
## BEHAVIOURAL BIOMETRICS

Behavioral biometrics is a new approach to cybersecurity that uses machine learning algorithms to analyze user behavior. This technology can detect patterns in the way users interact with devices, such as typing speed, mouse movement, and navigation. By analyzing these patterns, behavioral biometrics can identify potential threats, such as hackers who have gained access to a user's account.




Every user has individual patterns that indicate their unique ways of browsing a website and using an app—and these patterns provide a strong foundation for establishing trust.

Behavioral biometrics improves the ability to recognize trusted digital users and detect suspected fraud. This intuitive and non-intrusive technology supports more accurate customer recognition to allow organizations across multiple industries to Prioritize personalized experiences for trusted users, Apply appropriate levels of friction for specific touchpoints or higher-risk events, Prevent complex types of fraud, including new account opening fraud, account takeover and scams Stopping fraud before it enters your digital ecosystem starts with confidently differentiating genuine transactions from suspicious activities.

Behavioral biometrics is a passive and proactive way to identify and understand individual usage patterns at the start of a transaction so your business can:

- Detect signals of automation
- Isolate anomalies in typical behaviors
- Target typical fraudulent behavior

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