

Solution Brief

Smart Authentication
Artificial Intelligence



HUMMINGBIRDS AI

Bolstering Security and Simplifying Authentication with Hummingbirds AI's Guacamole™ Solution

The Guacamole™ solution leverages vision AI and Intel® technology to help companies enhance security, productivity, and compliance with a seamless, AI-powered authentication experience.

accelerated by **intel.**

About Hummingbirds AI

Hummingbirds AI is a pioneering computer vision startup acclaimed for its innovative use of AI and computer vision in security, compliance, and the future of work. Their flagship product, Guacamole, introduces touchless continuous authentication, revolutionizing cybersecurity. Committed to simplicity and human-centric security, Hummingbirds AI is leading the industry with cutting-edge AI solutions. The rapid market adoption of the Guacamole solution underscores their mission to redefine security through advanced technology.

Addressing the Burden of Repetitive Authentication While Maintaining Online Safety


In today's digital world, cyberattacks are a constant threat, with an estimated 2,000 attacks happening daily.¹ As businesses seek better protection, the limitations of traditional security measures—such as complex passwords and frequent logins—have become more apparent. These conventional methods can frustrate users and lead to unsafe practices like password reuse. In fact, according to Verizon's Data Breach Investigations Report, 80% of data breaches involve compromised login credentials.²


Not only do these breaches risk exposing critical information, but they also come at a significant expense: the average cost of a single breach in 2023 reached \$4.45 million dollars in losses, underpinning the importance of safeguarding sensitive data.³ According to the World Economic Forum, 95% of cybersecurity issues can be attributed to human error.¹ In particular, authentication fatigue can greatly undermine cybersecurity, as it positions humans as the weakest link in the security chain.


What is Authentication Fatigue and Why Does It Matter?


Authentication fatigue refers to the weariness or frustration experienced by users when they must repeatedly authenticate themselves to log in and out of digital systems. Consider the common inconvenience of multi-factor authentication, requiring users to provide multiple forms of verification, like a password and a temporary code sent to their phone, to access their computers.

It's important to be aware of the friction that comes with accessing devices because it can lead to the following negative outcomes:

 **Weakened Security:** Users may resort to weak passwords, reuse passwords across multiple accounts, or write down passwords in insecure locations to avoid the hassle of remembering them.

 **Decreased Productivity:** Frequent authentication prompts disrupt workflow and productivity. When users are asked to log in many times throughout the day, this seemingly-small disruption compounds into considerable distractions over time.

 **Reduced Compliance Adherence:** Fatigue from complex authentication processes can result in employees failing to comply with security protocols such as logging out of a device when grabbing a coffee or going to the restroom, leaving their workspaces vulnerable.

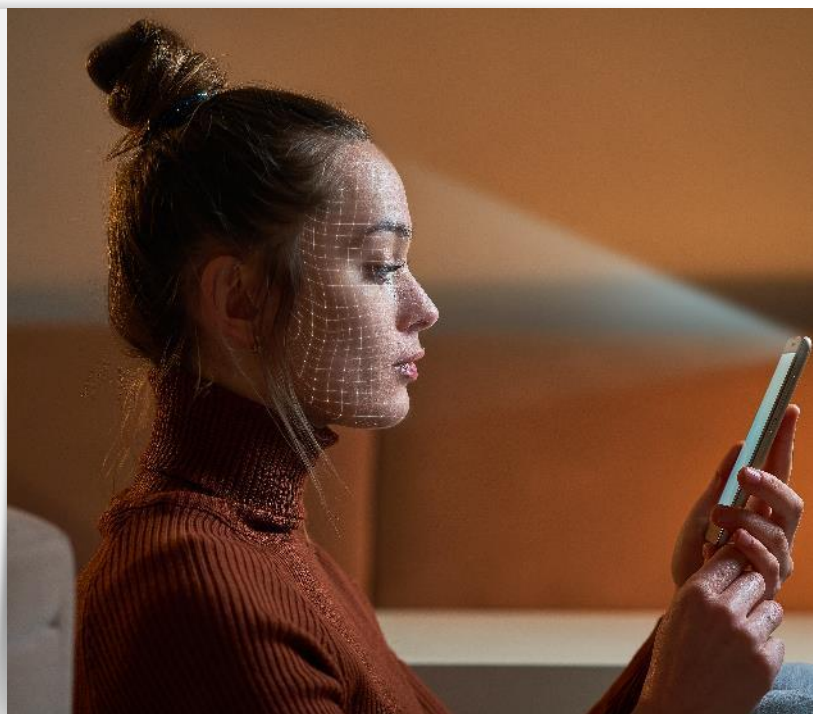
 **Poor User Experience:** The demands of traditional authentication methods like repeated password entry, regular password updates, and multi-factor verification codes create friction in the user experience, leading to frustration and inefficiency.

This constant juggling between security and convenience creates an ongoing source of tension for users, necessitating a solution that seamlessly integrates both. That's where Guacamole steps in. Developed by Hummingbirds AI, it's a fresh take on security that harnesses AI and computer vision technology to simplify the authentication process and make data protection smoother and more effortless than ever before.

Harmonizing Security and User Experience with Guacamole

In contrast to the typical approach of combating cyber threats with layers of complexity that can lead to user frustration and inefficiency, Guacamole adopts a different strategy: by relying on continuous re-authentication through facial biometrics, it removes tedious log in elements from the process and reduces the risk of user error. Hummingbirds AI offers a user-friendly, frustration-free authentication experience without compromising security by implementing automated verification, safeguarding on-screen content, and mitigating authentication fatigue caused by frequent password entry.

Utilizing a suite of advanced vision AI algorithms, Guacamole processes webcam footage in real-time to uniquely identify users within an adjustable active zone in front of their computers. Authorized users are seamlessly logged in simply by glancing at their camera within the active zone, while unauthorized individuals are denied access. When users step away, Guacamole automatically secures the computer, preventing unauthorized access until the authorized user returns. The solution is compatible with all camera types,



ensuring easy installation and accessibility across a broad spectrum of devices and user groups. Guacamole not only streamlines authentication but also prioritizes the privacy and security of user data, ensuring that sensitive information remains protected.

Guacamole achieves streamlined security through a core set of key features



Fast Access Verification: Guacamole utilizes an edge-based design, minimizing latency and eliminating dependence on internet connection. By harnessing the capabilities of edge computing, it processes video data locally, increasing verification speed and offering users touchless and immediate access to their devices and information.



Continuous Re-Authentication: The solution differs from traditional authentication methods by offering continuous protection beyond the initial login. Guacamole uses advanced video analytics to verify the user's identity through facial biometrics, ensuring the right person is always in front of the screen. This enhances device security by eliminating the need for manual login and logout processes.



Secure Data Protection: Guacamole ensures stringent privacy and security measures for user data through encryption and strict compliance with regulations such as HIPAA and GDPR. All data is processed at the edge to ensure no footage or personally identifiable information is ever transmitted or stored remotely. This approach maximizes user privacy, making Guacamole a trusted solution for enterprises prioritizing confidentiality and data integrity.



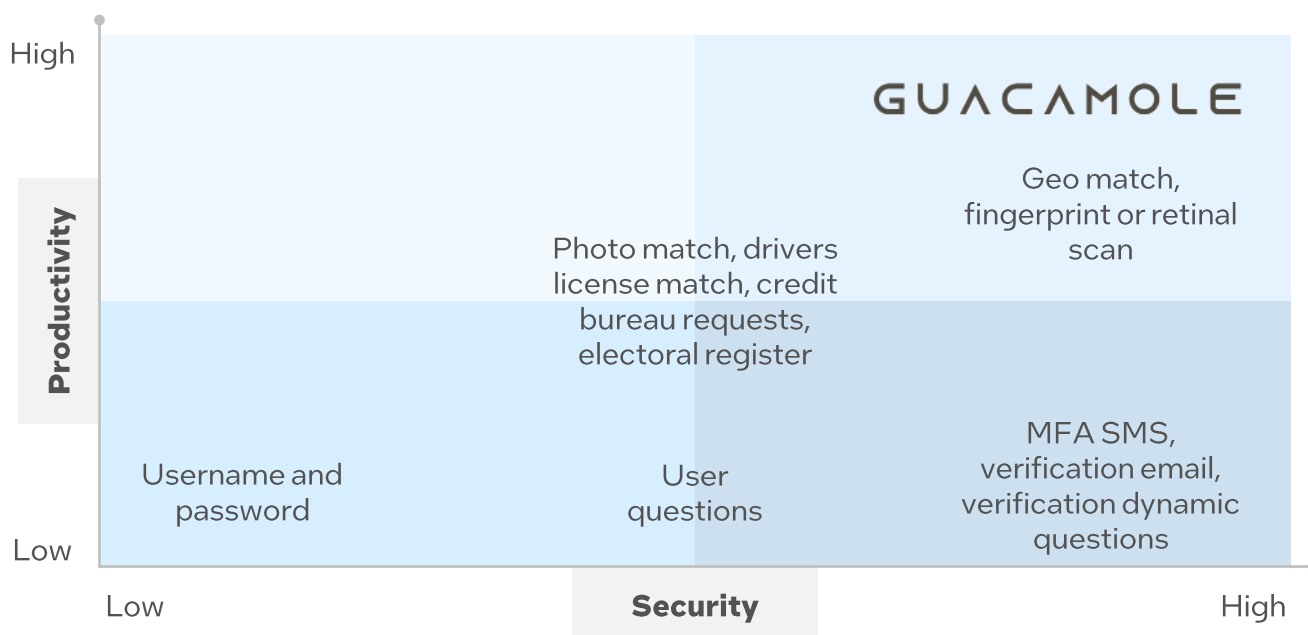
Shoulder Surfing Prevention: This feature offers an additional layer of security to protect against shoulder surfing, where individuals attempt to view a computer screen by looking over a user's shoulder. Guacamole can detect prolonged screen viewing by unauthorized individuals and will automatically blur the screen to safeguard data. This is especially beneficial in public workspaces like coffee shops and coworking spaces, where privacy concerns are heightened.



Intuitive Interface and Easy Deployment: Guacamole provides an easy-to-use interface and user-friendly features for secure computer access. With scalable infrastructure support in deployment and management, it's simple to enroll new users, assign them to computers, and efficiently manage them within large organizations.

Guacamole is deployed as a Windows desktop application and offers both a standalone and connected version, each designed to operate without continuous network connectivity. In both versions, data processing occurs locally on the device without needing to communicate over the network. Critical functions like facial matching and biometric analysis are performed on the edge to reduce latency, increase efficiency, and ensure robust data privacy and security that users can trust.

Productivity & Security AI



How Guacamole Can Benefit a Variety of Industries

Guacamole is a versatile solution that offers a range of use cases across industries and applications:

- **Enterprises and Corporate Settings:** Protects company information from unauthorized access and ensures compliance with regulatory requirements.
- **Healthcare:** Ensures secure access to electronic medical records and safeguards sensitive patient information.
- **Financial Sector:** Protects against identity theft and ensures secure access to financial records.
- **Educational Institutions:** Maintains secure access to student records and confidential data.

With Guacamole, users experience seamless access control, enhanced security, and improved productivity without the hassle of traditional authentication methods.

End Customer Benefits

- 1 Enhanced Security:** Providing continuous authentication, Guacamole helps mitigate the risk of unauthorized access and data breaches resulting from human error, offering users a reliable security solution.
- 2 Improved Productivity:** Guacamole automates the authentication process, eliminating the accumulated friction of frequent manual logins. This reduces authentication fatigue and enhances workflow efficiency, saving valuable time for employees.
- 3 Optimized Privacy Protection:** Guacamole ensures confidentiality in open office environments with a privacy-focused design. Its smart features automatically blur the screen when users step away, preventing unauthorized viewing of sensitive information.

Intel® Technology Helps Boost Guacamole to the Next Level

The **OpenVINO™ toolkit** serves as the backbone of the Guacamole solution, empowering Hummingbirds AI to revolutionize authentication through cutting-edge computer vision and AI inference capabilities. Designed to accelerate deep learning inferences across Intel® hardware, this toolkit enables faster inference performance and reduced latency. By harnessing these capabilities, Guacamole was able to deploy its vision AI algorithms directly on local hardware without relying on cloud-based processing. This helped achieve real-time inferencing on the edge, significantly enhancing performance with acceleration factors ranging from 1.5 to 8 times for tasks like object detection, human pose estimation, and segmentation, contributing to seamless facial recognition.⁴

The OpenVINO toolkit optimizes AI models to run efficiently on **Intel® Core™ processors**, enhancing performance and enabling seamless deployment of AI applications at the edge. This allows Hummingbirds AI to consistently deliver a seamless authentication experience with enhanced speed and accuracy across a wide range of computing environments. Incorporating Intel technology into the solution not only helped elevate performance and efficiency, but also improved compatibility and scalability. With Intel as a trusted technology partner for Hummingbirds AI, this collaboration is poised to continue pushing the boundaries of authentication innovation.

4. Data from internal test results of Hummingbirds AI. Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

Conclusion

Guacamole represents a unique approach to authentication solutions, where the traditional trade-off between security and convenience is no longer an issue. By prioritizing usability without compromising the effectiveness of security, Guacamole offers a seamless and intuitive experience that empowers users to navigate digital environments with confidence and ease. It's not solely about security; it's about redefining the way people interact with technology, ensuring that safeguarding sensitive information is as effortless as it is effective. With Guacamole, users enter an era where accessing devices is not only as easy as sitting in front of a screen, but also fortified with layers of protection that promise security without the headache.

To learn more about Hummingbirds AI and their Guacamole solution, visit their [website](#) today!

Learn More

To learn more about the Hummingbirds AI Guacamole Solution visit:

- [Hummingbirds AI Guacamole Product Website](#)
- [Guacamole Marketing Materials](#)
- [Guacamole Demo Video](#)

To learn about Intel® technologies visit:

- [Intel® Core™ Processors Product Page](#)
- [OpenVINO™ Toolkit Product Page](#)



Accelerated by Intel® offerings take advantage of at least one Intel® technology, such as built-in accelerators, specialized software libraries, optimization tools, and others, to give you the best experience possible on Intel hardware.

With Intel technologies and capabilities, a vendor's optimized offering can go beyond the traditional compute and extend to accelerated networking, storage, edge, and cloud. It's all part of helping customers build an optimized infrastructure across the company.

Sources

1. [World Economic Forum finds that 95% of cybersecurity incidents occur due to human error](#), Cybernews, 2022
2. [How Compromised Passwords Lead to Data Breaches](#), IDX, 2022
3. [Cost of a Data Breach Report 2023](#), IBM, 2023
4. Data from internal test results of Hummingbirds AI. Intel does not control or audit third-party data. Please review the content, consult other sources, and independently confirm if the data provided is accurate.

Notices & Disclaimers

Intel technologies may require enabled hardware, software or service activation. No product or component can be absolutely secure. Your costs and results may vary. Intel does not control or audit third-party data. You should consult other sources to evaluate accuracy.

Intel is committed to respecting human rights and avoiding causing or contributing to adverse impacts on human rights. See Intel's [Global Human Rights Principles](#). Intel's products and software are intended only to be used in applications that do not cause or contribute to adverse impacts on human rights.

© Intel Corporation. Intel, the Intel logo, OpenVINO, the OpenVINO logo, and other Intel marks are trademarks of Intel Corporation or its subsidiaries. Other names and brands may be claimed as the property of others.