

Presentación de la Tesis Doctoral: “Privacidad y gestión de la identidad en procesos de analítica del aprendizaje”

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Resumen

Esta es la presentación de la Tesis Doctoral de D. Daniel Amo Filvà, titulada “Privacidad y gestión de la identidad en procesos de analítica del aprendizaje”, realizada en el Programa de Doctorado Formación en la Sociedad del Conocimiento de la Universidad de Salamanca, que fue defendida el 31 de enero de 2020 en el IUCE de la Universidad de Salamanca. Esta tesis recibió la máxima calificación de “Sobresaliente Cum Laude”.

Las analíticas en el contexto educativo (*Academic Analytics / Learning Analytics*) implican un procedimiento de explotación de datos para la mejora del proceso de enseñanza/aprendizaje. Este procedimiento consiste en recolectar, analizar y crear visualizaciones de los datos de los procesos educativos y/o de los estudiantes. Los datos personales, registros de actividad y metadatos de estudiantes y profesores se almacenan, comparten, transforman y utilizan a discreción por las instituciones educativas y servicios de terceros.

La privacidad, confidencialidad y seguridad de los datos personales de estudiantes quedan expuestas a diario cuando no hay un control o gestión adecuado. El tratamiento analítico de los datos puede ir en contra de los intereses o voluntad de los estudiantes. Esta situación es más delicada cuando se involucran menores de edad. El uso de las analíticas en educación está generando un creciente entorno de desconfianza en cuanto al tratamiento de datos de las personas involucradas.

Los procesos educativos donde intervienen procedimientos de analíticas educativas presentan un doble problema. Por un lado, la fragilidad de los datos debida a la baja protección de la privacidad, la confidencialidad y la seguridad de datos en los almacenes digitales. Por otro lado, la falta de madurez en los procedimientos y soluciones de protección de los datos personales y de la identidad de los estudiantes. El problema es grave y afecta tanto al uso como a la transferencia y custodia de datos generados por el estudiante.

Los términos de uso y políticas de privacidad imponen unas condiciones que estudiantes y profesores deben validar para usar el servicio. No obstante, durante el uso del servicio no suele quedar claro ni para los estudiantes, ni para los profesores, ni para las instituciones dónde están los límites de uso, acceso, gestión o tratamiento de datos.

Las leyes de protección de datos otorgan una serie de derechos a estudiantes y profesores, contemplando incluso situaciones excepcionales y de índole personal. Estos derechos ofrecen un margen de libertad en la configuración de sus perfiles, que las plataformas de aprendizaje deben considerar como parte de su diseño y activadas por defecto. Las plataformas educativas no disponen de las funcionalidades para ejercer todos los derechos.

La presente tesis investiga de forma analítica el estado de la cuestión. El trabajo realizado en la investigación identifica, diseña y evalúa soluciones que resuelven total o parcialmente de la problemática descrita. En primer lugar, se exploran las posibilidades de la tecnología emergente *blockchain*. En segundo lugar, se evalúan soluciones a nivel de almacén de datos en los entornos virtuales de aprendizaje. En ambas perspectivas se aborda una parte experimental centrada en el desarrollo de prototipos funcionales para:

- Que exista una adecuada protección, confidencialidad y seguridad de los datos educativos almacenados.
- Que las plataformas educativas estén tecnológicamente preparadas para asumir el ejercicio de los derechos del estudiante.
- Y, finalmente, que se pueda transferir a roles educativos la necesidad de proteger a los estudiantes y profesores haciendo un uso correcto de las herramientas digitales del aula.

Los resultados de la investigación reflejan que el problema es complejo y múltiple. Se demuestra que *blockchain* no puede aportar soluciones a la privacidad y seguridad a nivel del almacén de datos. Desde la perspectiva de los entornos virtuales de aprendizaje, se aportan propuestas para el avance de la ciencia y se

implementan soluciones funcionales a cuestiones concretas del problema. La investigación aporta una evolución clara al estado de la cuestión y nuevas líneas de trabajo en las que abordar distintas cuestiones de la problemática a futuros.

Palabras clave

Blockchain, Smart Contracts, Learning Analytics, Entornos Virtuales de Aprendizaje, Confidencialidad de Datos Personales, Gestión de la Identidad Digital, Reglamento General de Protección de Datos, Privacidad, Seguridad.

Enlaces a la memoria de tesis doctoral

Memoria de la tesis: <https://bit.ly/381Zj0j>.

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Enlace a la presentación

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