

 	<b>DESCRIPCIÓN BIBLIOGRÁFICA DEL TRABAJO FIN DE ESTUDIOS IKASKETEN AMAIERAKO LANARI BURUZKO BIBLIOGRAFIAREN DESKRIBAPENA</b>	PC 934 ANX1
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**Campos OBLIGATORIOS / NAHITAEZ bete beharreko eremuak**

<b>AÑO / URTEA (20xx):</b> 15	<b>Trabajo Fin de Grado (TFG) / Gradu Amaierako Lana (GAL)</b> <input checked="" type="checkbox"/> <b>Trabajo Fin de Máster (TFM) / Master Amaierako Lana (MAL)</b> <input type="checkbox"/>	
<b>Título del TFG/TFM / GAL/MALaren izenburua:</b> Clustering y clasificación de huellas dactilares para reducir el ratio de penetración		
<b>Autor (Apellidos, Nombre) / Egilea (Deiturak, izena):</b> Iosu Urriza Rivera		
<b>Director / Zuzendaria:</b> Mikel Galar Idoate	<b>UPNA / NUP</b> <input checked="" type="checkbox"/> <b>Otro (Indicar) / Beste bat (Jarri)</b>	
<b>Codirector, si existe / Zuzendarikidea, halakorik badago</b> Jose Antonio Sanz Delgado	<b>UPNA / NUP</b> <input checked="" type="checkbox"/> <b>Otro (Indicar) / Beste bat (Jarri)</b>	

<b>Inglés Ingelesa</b>	<p><b>Abstract (Resumen de 100-250 palabras) / Abstract (Laburpena 100-250 hitzetan)</b></p> <p>This project consist of reducing the penetration rate for fingerprint recognition by clustering and classification. We use this method instead of the traditional one based on classification into five classes. In the new model larger number of groups or clusters are used to obtain more classes, and hence increase the penetration rate.</p> <p>To form the new classes of fingerprints we use K-means algorithm. This algorithm is based on a set of data grouped in different groups of "clusters". Each cluster will have a centroid that will serve to classify new data.</p> <p>Using k-means also as a classifier, we classify the different fingerprints. With this classification we can calculate the average penetration rate to know what percentage of the database must be analyzed to find the searched fingerprint. In addition, we will use other kind of classifier called Support Vector Machines (SVM), to learn from K-means created classes and compare both models.</p> <p>To validate the models we will use multiple fingerprint databases with different qualities and compare the results with the usage of k-means for classification to check the two models and compare their results.</p> <p><b>Materias o Palabras Clave (máximo 5) / Gaiak edo hitz gakoak (gehienez 5)</b></p> <p>Fingerprint classification, K-means, SVM, Classification, penetration rate</p>
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**Campos OPTATIVOS / AUKERAKO eremuak**

<b>no Gaztela</b>	<p><b>Abstract (Resumen de 100-250 palabras) / Abstract (Laburpena 100-250 hitzetan)</b></p>
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	<b>Materias o Palabras Clave (máximo 5) / Gaiak edo hitz gakoak (gehienez 5)</b>
<b>Euskera Euskara</b>	<b>Abstract (Resumen de 100-250 palabras) // Abstract (Laburpena 100-250 hitzetan)</b>
	<b>Materias o Palabras Clave (máximo 5) / Gaiak edo hitz gakoak (gehienez 5)</b>
<b>Otro Idioma Beste hizk. bat</b>	<b>Abstract (Resumen de 100-250 palabras) // Abstract (Laburpena 100-250 hitzetan)</b>
	<b>Materias o Palabras Clave (máximo 5) / Gaiak edo hitz gakoak (gehienez 5)</b>