Abstract: There is a huge online data about job descriptions which has been entered by job seekers and job holders that can be utilized to give insight into the current state of jobs. Employers also produce large volume of vacancy data online which can be exploited to portray the current demand of the job market. When preparing job vacancies, taking into account the information contained in job descriptions, and vice versa, the likelihood of getting the bidirectional match of a job description and a vacancy will be improved. To improve the quality of job descriptions and job vacancies, a mediating system is required that connects and supports job designers and employers, respectively. In this paper, we propose a framework of an automatic bidirectional matching system that measures the degree of semantic similarity of job descriptions provided by job-seeker, job-holder or job-designer against the vacancy provided by employer or job-agent. The system provides suggestions to improve both joint descriptions and vacancies using a combination of text mining methods.

Adaptive Augmented Reality in Mobile Applications for Helping People with Mild Intellectual Disability in Ecuador
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Keywords: A R, Maps, Helping People, Mobile Computing, Return Home, Monitoring.

Abstract: Adaptive Augmented Reality (A R) is an emerging technology that can support users in their daily life with useful information for their activities, which are really adapted to the user’s characteristics, as well as the environment and the context where the activities are taking place. In Ecuador, mild intellectual disability is being considered as part of the government policies, for this reason we considered developing an app to help locate people with mild intellectual disability who at one time may feel lost and may not know how to return home. So the app allows caregivers to always know where their dependents are every time. We adopted A R approach for developing this app so we had to model both user needs and their interests. Apart from User Model, we will also show the other A R models required.

Utilizing Virtual Communities for Information Retrieval and User Modeling
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Keywords: Personalized Information Retrieval, User Modeling, User Profile, Virtual Communities.

Abstract: Internet has become the largest library in human history. Having such a large library made the search process more complicated. In fact, traditional search engines respond users by sending back the same results to different users having expressed different information needs and different preferences. A sign cant part of dif culties report to vocabulary problems (polysemy, synonymy,...). Such problems trigger a strong need to personalize the search results based on user preferences. The goal of personalized information is to generate meaningful results interesting to a number of information users using their pro le. This paper presents a personalized information retrieval approach based on user pro le. User pro le is built from the acquisition of explicit and implicit user data. The proposed approach also presents a semantic-based optimization method for user query. The system uses user pro le to construct virtual communities. Moreover, it uses the user’s navigation data to predict user’s preferences in order to update virtual communities.

Facebook Posts Text Classification to Improve Information Filtering
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Keywords: Facebook Posts, Text Classification, Pre-processing, Machine Learning Algorithms, Internet Slang.

Abstract: Facebook is one of the most used social networking sites. It is more than a simple website but a popular tool of communication. Social networking users communicate between them exchanging a several kinds of content including a free text, image and video. Today, the social media users have a special way to express themselves. They create a new language known as internet slang, which crosses the same meaning using different lexical units. This unstructured text has its own specific characteristics, such as, massive, noisy and dynamic, while it requires novel preprocessing methods adapted to those characteristics in order to ease and make the process of the classi cation algorithms effective. Most of previous works about social media text classi cation eliminate Stopwords and classify posts based on their topic (e.g. politics, sport, art, etc). In this paper, we propose to classify them in a lower level into diverse pre-chosen classes using three machine learning algorithms SVM, Naïve Bayes and K-NN. To improve our classi cation, we propose a new preprocessing approach based on the Stopwords, Internet slang and other specific lexical units. Finally, we compared between all results for each classi er, then between classifier results.

Towards an Automated Analysis of the Online Supply Chain of Novel Psychoactive Substances
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Keywords: Web Intelligence, Web Mining, Web Applications, Data Visualization.

Abstract: Novel Psychoactive Substances (NPSs), also known as legal highs or smart drugs, are legal alternatives to illegal drugs. Many drugs consumers are appealed by the opportunity of buying substances without any legal consequences. Online shops, virtual marketplaces and other trade channels thrive in this legal grey area. The health risks connected to this phenomenon are high: every year hundreds of people present symptoms deriving to the use or abuse of those unknown chemicals, and health professionals may struggle to provide the appropriate treatments. EU is taking some countermeasures, forbidding the
A Reference Framework to Support Interoperability and Maintainability of Software Process Models

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Keywords: Model-Driven Engineering, Software Processes Interoperability

Abstract: Nowadays software systems have become increasingly complex. Developing quality software products, with an acceptable time-to-market and competitive cost is the main challenge which many software organizations constantly face to. Besides, we have to add to this challenge the fact that time when the product development was completely located in a specific and concrete place is over. The access to the most important and main international experts has become easier in this global situation where we live. In the software context, it is especially evident that the technology is continuously in change and evolution. Software organizations must manage the complexity of their products, due to the inherent properties of their context: the participation of multiple development teams in different sites in the world, distinct knowledge, and diverse culture and tools, are elements to evaluate when new ways of working, also called processes, are established. In other words, software processes should include the set of technologies, best practices and strategies that allow us to manage effectively the development made by great engineer teams along the products lifecycle. There are many standards and reference models which are used by organizations as guidelines to build their processes, like a guarantee to be able to survive successfully in this environment. Thus, processes have been considered as one of the most important assets in an organization. At the time of defining the processes, organizations want to use increasingly a specific modeling language in order to carry out this task. But the decision of what is the most adequate modeling language is not trivial. There are a lot of modeling languages created for this purpose, the link established between processes and language is highly strong, and an organization faces to a kind of "Babel Tower" since, they have not only multiple choices but the possibility of these languages can understand each other is faraway. This situation is especially evident when two or more different organizations (enterprises or department inside the same enterprise) want to develop products together. This paper is motivated to solve this problem: Why is it necessary to choose exclusively one process modeling language? Why can we not use the most adequate language in each moment? Our objective is to get something similar to what Esperanto pursue in the field of linguistics. In order to achieve it, we have developed a reference framework to facilitate the interoperability and maintainability of software process models by taking advantage of the Model-Driven Engineering paradigm. We aim to define a framework where organizations could include the modeling language that they have used during the definition of their processes, and interoperate seamlessly with other ones. Our proposal is supported on three pillars: a base software process modeling language, named INROMA, which embodies the minimal and necessary concepts of processes; the method to include a process modeling language into the framework; and, finally, the transformations which formalize the use of the framework. The three pillars are based on standards like ISO/IEC TR 44474, MOF and QVT. This theoretical framework has been implemented in practice as MONETA, a CASE tool that provides support to use the reference framework in real projects. The reference framework is one of the parts of the theoretical foundation of the EMPOWER platform, which allows managing processes from MDE point of view. Nowadays, EMPOWER is being developed by Servinform (a Spanish software company) and has a budget of 700.000€ for the 2015-2016 period. As future work, we are trying to enrich the reference framework and their pillars in order to support interoperational collaboration processes and case management, including aspects not only of definition, but also of processes execution.

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