
	FORM FOR PROPOSING A TOPIC IN THE SECOND CYCLE OF STUDIES	Oznaka	
		Datum usvajanja	09.04.2020
		Datum/Br. revizije	-
		Stranica	1/1


Department	Department of Information Technologies
Master thesis title:	Ad Fraud Tracking and Prevention
Mentor/professor - contact: Co-mentor/professor contact:	Assist.Prof.Dr. Dino Keco

Thesis background:	Ad Fraud is one of the biggest crimes in history of humanity. There are not exact facts how much money is lost in this industry. The main problem are bot farms that are making fake clicks and impressions in digital advertisement. Advertisers are not able to fight this crime because Ad Networks are directly profiting from it.
Thesis objective:	Thesis Objective is to develop a tool to detect fraudulent websites, users, IPs and devices to give tools to advertiser to avoid those when buying traffic.
Literature:	<p>[1] N. Daswani, C. Mysen, V. Rao, S. Weis, K. Gharachorloo, and S. Ghose-majumder, "online advertising fraud crimeware: understanding new attacks and defenses," vol. 40, pp. 1–28, 2008.</p> <p>[2] R. Oentaryo, E.-P. Lim, M. Finegold, D. Lo, F. Zhu, C. Phua, E.-Y. Cheu, G.-E. Yap, K. Sim, M. N. Nguyen, K. Perera, B. Neupane, M. Faisal, Z. Aung, W. L. Woon, W. Chen, D. Patel, and D. Berrar, "Detecting click fraud in online advertising: A data mining approach," Journal of Machine Learning Research, vol. 15, no. 3, pp. 99–140, 2014.</p> <p>[3] D. Chaffey and F. Ellis-Chadwick, Digital Marketing: Strategy, Implementation and Practice. Pearson Education, 1 ed., 2012.</p> <p>[4] T. Pineiro-Otero and X. Martinez Rolan, understanding digital marketing basics and actions. Springer-Verlag GmbH, 09 2016.</p> <p>[5] X. Zhu, H. Tao, Z. Wu, J. Cao, K. Kalish, and J. Kayne, Fraud Prevention in Online Digital Advertising. Springer Publishing Company, Incorporated, 1st ed., 2017.</p> <p>[6] B. IA, "Openrtb api specification version 2.5." https://www.iab.com/wp-content/uploads/2016/03/OpenRTB-API-Specification-Version-2-5-FINAL.pdf, Dec. 2016.</p>

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Department	Information Technologies
Master thesis title:	Automatic Text Summarization of Written Material in Bosnian, Serbian and Croatian Languages
Mentor/professor - contact: Co-mentor/professor contact:	Dino Kečo – dino.keco@ibu.edu.ba

Thesis background:	<p>Summarization is the task of condensing a piece of text to a shorter version, reducing the size of the initial text while at the same time preserving key informational elements and the meaning of content. Since manual text summarization is a time expensive and generally laborious task, the automatization of the task is gaining increasing popularity and therefore constitutes a strong motivation for academic research. With growing amount of textual data circulating in the digital space, there is a need to develop machine learning algorithms that can automatically shorten longer texts and deliver accurate summaries. By a large majority, most of the research in text summarization has been conducted for English texts, and other resource-rich languages such as German, Spanish, French and Chinese. However, there is a distinct lack of research in this field regarding the South Slavic language group, namely Bosnian, Serbian and Croatian languages.</p>
Thesis objective:	<p>The main objective of this thesis is the creation of an automatic text summarization system for use on Bosnian, Serbian and Croatian language materials, whose generated summaries should:</p> <ol style="list-style-type: none"> 1. fluently parse the intended messages and texts 2. reduce reading time and speed up the process of researching for relevant information <p>Moreover, a secondary objective of the thesis would be bringing more attention to research in the field of text summarization for the South Slavic language group, a topic which is not that commonly discussed in academic circles.</p>
Literature:	<p>M. Allahyari, S. Pouriyeh, M. Assefi, S. Safaei, E. D., J. B., and K. Kochut, "Text Summarization Techniques: A Brief Survey," <i>International Journal of Advanced Computer Science and Applications</i>, vol. 8, no. 10, 2017.</p> <p>J. L. Neto, A. A. Freitas, and C. A. A. Kaestner, "Automatic Text Summarization Using a Machine Learning Approach," <i>Advances in Artificial Intelligence Lecture Notes in Computer Science</i>, pp. 205–215, 2002.</p> <p>R. Nallapati, B. Zhou, C. D. Santos, C. Gulcehre, and B. Xiang, "Abstractive Text Summarization using Sequence-to-sequence RNNs and Beyond," <i>Proceedings of The 20th SIGNLL Conference on Computational Natural Language Learning</i>, 2016.</p> <p>T. Baumel and M. Elhadad, "A Survey of Neural Models for Abstractive Summarization," <i>Multilingual Text Analysis</i>, pp. 175–199, 2019.</p>

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Department	Information Technologies
Master thesis title:	Sentiment Analysis of Written Material in Bosnian Language
Mentor/professor - contact: Co-mentor/professor contact:	Dino Kečo - dino.keco@ibu.edu.ba

Thesis background:	<p>Sentiment analysis is a text analysis method that detects polarity (e.g. a positive or negative opinion) within text, whether a whole document, paragraph, sentence, or clause. It is a type of contextual mining of text which identifies and extracts subjective information in source material, and helps various businesses to understand the social sentiment of their brand, product or service while monitoring online conversations. The problem of sentiment analysis and determination of comments sentiment is not a new area of research, but with the appearance of machine processing of natural language and machine learning algorithms for classification, greater progress in this area has been made. However, most developed tools for sentiment analysis are based on the English language, and similar resource-rich languages. There is a distinct lack of proper sentiment analysis systems for the Bosnian language, whose language, morphological and grammar complexity makes the analysis of texts even more difficult.</p>
Thesis objective:	<p>The main objective of this thesis is the creation of an effective sentiment analysis and classification system for textual material in Bosnian, a morphologically complex South Slavic language. Additionally, a secondary objective of the thesis would be bringing more attention to research in the field of sentiment analysis for the South Slavic language group, a topic which is not that commonly discussed in academic circles.</p>

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Literature:	<p>M. V. Mäntylä, D. Graziotin, and M. Kuutila, “The evolution of sentiment analysis—A review of research topics, venues, and top cited papers,” <i>Computer Science Review</i>, vol. 27, pp. 16–32, 2018.</p> <p>P. Tyagi and R. C. Tripathi, “A Review Towards the Sentiment Analysis Techniques for the Analysis of Twitter Data,” <i>SSRN Electronic Journal</i>, 2019.</p> <p>X. Fang and J. Zhan, “Sentiment analysis using product review data,” <i>Journal of Big Data</i>, vol. 2, no. 1, 2015.</p> <p>R. Prabowo and M. Thelwall, “Sentiment analysis: A combined approach,” <i>Journal of Informetrics</i>, vol. 3, no. 2, pp. 143–157, 2009.</p>
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