

Zgłoszenie tematu **INŻYNIERSKIEJ** pracy dyplomowej**STUDIA I STOPNIA** rok akademicki 2019/20

Promotor:	dr hab. Jozef Kapusta, prof. UP
Temat pracy dyplomowej (j. polski, j. angielski):	<i>Application of Sequence Analysis to Moodle Log Records</i> <i>Zastosowanie analizy sekwencyjnej do rejestrów Moodle</i>
Zakres pracy i oczekiwane rezultaty praktyczne:	<p>Learning analytics gains more and more attention in the field of education. Learning analytics applies modern statistical techniques and machine learning methods to the learning process.</p> <p>The thesis will be focused on the analysis of the behaviour of students in the virtual learning environment Moodle. This system creates its log file (activities record) which follow series – sequences in visiting individual Moodle sources (activities) by the student in e-course. The student will apply selected methods of sequence analysis on Moodle Logs. The application of methods for session time threshold, application of Apriori-All Algorithm, application of some selected other sequence analysis method and "user-friendly" visualization of results will create an important part of the practical solution.</p>
Aspekt inżynierski*:	Selection and implementation of web mining techniques, analysing e-courses using the web log mining techniques.
Wymagane oprogramowanie/języki programowania**:	Jupyter Notebook Environment (Python)
Środowisko uruchomieniowe**:	Windows or Linux
Dodatkowe wymagania i uwagi:	English language
Literatura**:	<ul style="list-style-type: none"> • Bing, L. (2011). Web Data Mining: Exploring Hyperlinks, Contents, and Usage Data. Springer Heidelberg. p. 637. ISBN 978-3-642-19459-7. • Munk, M., Kapusta, J., Švec, P., (2010). Data Preprocessing Evaluation for Web Log Mining: Reconstruction of Activities of a Web Visitor, in ICCS 2010 - International Conference on Computational Science, Elsevier Science: Amsterdam. p. 2267-2274. • Lang, C., Siemens, G., Wise, A., Gašević, D. (2017). The Handbook of Learning Analytics. Society for Learning Analytics Re-

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	<p>search</p> <ul style="list-style-type: none">• Romero, C., Ventura, S., Pechenizkiy, M., Baker, R.S.J.d. (2010). Handbook of Educational Data Mining. Chapman & Hall/CRC• Preidys, S., Sakalauskas, L. (2010). Analysis of students' study activities in virtual learning environments using data mining methods. Ukio Technologinis ir Ekonominis Vystymas 16, 94-108
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***należy uzasadnić/wskazać, czy praca spełnia wymagania inżynierskie**

****pola opcjonalne**