## Vuk Batanović

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# Curriculum vitae

### Goals and aims

- Develop NLP solutions for Serbian and other less prominent languages
- Apply modern machine learning techniques in NLP research

### **Education**

• School of Electrical Engineering, University of Belgrade

### 2012 - present

PhD studies in natural language processing, **10/10** GPA, Dept. of Software Engineering Planned thesis: *A methodology for solving semantic tasks in the processing of short texts written in natural languages with limited resources* 

### 2010 - 2011

Master's degree with a **10/10** GPA, Dept. of Computer Science and Engineering Thesis: *An expert system for determining the semantic similarity of short texts in Serbian* 

### 2006 - 2010

Bachelor's degree with a **9.56/10** GPA, Dept. of Computer Science and Engineering Thesis: *A visual simulator of search algorithms* 

### • Summer Schools and Seminars

- o ESSLLI 2016 28<sup>th</sup> European Summer School in Logic, Language and Information, Free University of Bozen-Bolzano, Italy
- o LxMLS 2016 6<sup>th</sup> Lisbon Machine Learning Summer School, Instituto Superior Técnico, Portugal
- o ReLDI (*Regional Linguistic Data Initiative*) seminars in Belgrade, Serbia, and Zagreb, Croatia, 2016/2017

#### • Online Courses

- o Natural Language Processing, Stanford University, Coursera
- o Natural Language Processing, Columbia University, Coursera
- o Machine Learning, Stanford University, Coursera

- o Introduction to Natural Language Processing, University of Michigan, Coursera
- Miracles of Human Language: An Introduction to Linguistics, Universiteit Leiden, Coursera
- o Text Retrieval and Search Engines, University of Illinois at Urbana-Champaign, Coursera
- o Data Mining with Weka, University of Waikato
- o More Data Mining with Weka, University of Waikato

### Research

### • Research Projects

o Research collaborator on the ReLDI (Regional Linguistic Data Initiative) SNSF SCOPES project 160501

### • Selected Papers (full bibliography available on website)

- o Vuk Batanović, Boško Nikolić, Milan Milosavljević: <u>Reliable Baselines for Sentiment Analysis in Resource-Limited Languages: The Serbian Movie Review Dataset</u>, in Proceedings of the 10th International Conference on Language Resources and Evaluation (LREC 2016), Portorož, Slovenia, pp. 2688–2696, 2016.
- o Vuk Batanović, Dragan Bojić: <u>Using Part-of-Speech Tags as Deep-Syntax Indicators in Determining Short-Text Semantic Similarity</u>, Computer Science and Information Systems, vol. 12, no. 1, pp. 1–31, 2015.
- Bojan Furlan, Vuk Batanović, Boško Nikolić: <u>Semantic similarity of short texts in languages with a deficient natural language processing support</u>, Decision Support Systems, vol. 55, no. 3, pp. 710–719, 2013.

#### • Created Datasets and Tools

- o <u>Serbian Movie Review Dataset (SerbMR)</u> sentiment analysis document collection
- o SRSentiComments Dataset sentiment analysis short-text collection
- o NBSVM-Weka a multiclass NBSVM implementation for Weka
- o  $\,$  SCStemmers a collection of stemmers for Serbian and Croatian
- o Serbian Paraphrase Corpus (SRParaphrase) semantic similarity short-text collection
- o <u>LinSTSS</u> and POST STSS algorithms for measuring the semantic similarity of short texts, particularly suitable for languages with limited access to advanced NLP tools

### • Grants and Scholarships

- o ReLDI project grant for the creation of language resources in Serbian
- o Elsevier grant for ESSLLI 2016 participation
- o Scholarship of the Fund for Young Talents of the Republic of Serbia

### Skills and interests

### • Professional interests

Sentiment analysis, semantic similarity, distributional semantics, short-text processing, morphological normalization, NLP for minor languages, multilingual NLP solutions, (deep) machine learning

### • Programming languages

Java, Python, C++, C#, C, Matlab, SQL

### • Language proficiency

- o **Serbian** (native)
- o **English** (fluent Cambridge Certificate of Proficiency in English (CPE), grade A)
- o French (limited)