Ivan Sekulić
Zagreb, Croatia

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isekulic.github.io

EDUCATION

University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia
MSc in Computer Science — Sep 2015 – Jul 2018

- Thesis: *Text-based Mental Disorder Prediction from Online Discussion Texts*
- Erasmus+ student mobility at Warsaw University of Technology, Poland

University of Zagreb, Faculty of Electrical Engineering and Computing, Croatia
BSc in Computer Science — Sep 2012 – Jul 2015

- Thesis: *Extraction of Semantic Verb Relations from Croatian Corpora*
- Extracurricular subjects: DisCont Mathematics, Advanced Use of Linux Operating System, Programming in Haskell, Object Oriented Programming.

WORK EXPERIENCE

StatNLP, Singapore University of Technology and Design
Research Fellow — Aug 2019 – Nov 2019

- Document-level relation extraction, under the supervision of prof. Wei Lu.

HITS – Heidelberg Institute for Theoretical Studies, Germany
Research Associate — Oct 2018 – Jun 2019

- Deep learning methods for predicting mental health status in social media users. Supervisor: prof. Michael Strube.

ReversingLabs, Croatia
Data Analyst — Sep 2017 – Aug 2018

- Data Quality / Program Management team, ensuring consistency and cleanliness of large and diverse datasets.

TakeLab – Text Analysis and Knowledge Engineering Lab, Croatia
Student Project Associate — Jun 2016 – Oct 2017

- Improving customer experience through state-of-the-art natural language processing by predicting user's sentiment, emotions and actions.

Ericsson Nikola Tesla, Croatia
Summer Intern — Jul 2015 – Aug 2015

- Developed a proof-of-concept application that crawls the Web and extracts important information and relations between entities from downloaded articles.

PUBLICATIONS

Adapting Deep Learning Models for Mental Health Prediction on Social Media
Ivan Sekulić and Michael Strube — 2019

- We adapt hierarchical attention networks for the task of predicting social media users' mental state in a large dataset, labeled for 9 different mental disorders;
- To appear in *Proceedings of the 2019 EMNLP-IJCNLP Workshop W-NUT: The 5th Workshop on Noisy User-generated Text*.

Not Just Depressed: Bipolar Disorder Prediction on Reddit
Ivan Sekulić, Matej Gjurković, and Jan Šnajder — 2018

- We present a preliminary study on bipolar disorder prediction from user-generated text on Reddit. Feature analysis shows differences in language use between users with bipolar disorders and the control group, while benchmark classifiers achieve accuracy over 85%;
- Published in *Proceedings of the 9th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis*.

TakeLab at SemEval-2016 Task 6: Stance Classification in Tweets Using a Genetic Algorithm Based Ensemble

Martin Tutek, **Ivan Sekulić**, Paula Gombar, Ivan Paljak, Filip Čulinović, Filip Boltužić, Mladen Karan, Domagoj Alagić, Jan Šnajder — 2016

- The system uses an ensemble of learning algorithms, fine-tuned using a genetic algorithm. We experiment with various off-the-shelf classifiers and build our model using standard lexical and a number of task-specific features. Ranked 3rd out of 20 teams in the international competition of semantic text analysis;
- Published in *Proceedings of SemEval-2016*.

VerbCROcean: A Repository of Fine-Grained Semantic Verb Relations for Croatian

Ivan Sekulić and Jan Šnajder — 2016

- We create VerbCROcean, a broad-coverage repository of fine-grained semantic relations, namely similarity, intensity, antonymy, and happens-before, between Croatian verbs;
- Published in *Proceedings of the 10th edition of the Language Resources and Evaluation Conference*.

PROJECTS

Deep Learning Models for Facebook Customer Experience Analysis

MA Research Project — Oct 2017 – Jan 2018

- Emphasis on multi-task learning to simultaneously predict labels for sentiment, emotions, speech acts, and more.

CROntroverza: Detecting Controversial Topics

BA Research Project — Oct 2014 – Mar 2015

- Developed a system that analyzes Croatian news articles and determines their level of controversy. The whole project was written in Haskell, working in a group of 4.

TECHNICAL SKILLS

Advanced	**Python** – main language; Pytorch, Keras, scikit-learn, Pandas **Linux** – OS of choice, sysadmin work experience
Novice	**C/C++** – used in university courses and competitive programming **Haskell** – used in university course and BA project **R** – university course and short experiments **Java** – used in university courses **LaTeX** – used to write this CV and everything relevant

OTHER SKILLS AND INTERESTS

Languages	Croatian (native), English (fluent), Polish (basic), German (basic)
Interests	Chess – international engineering students' meetup Elektrijada, winner 2014 and 2015 Rugby – Croatia cup winner 2018