Ivan Sekulić
Lugano, Switzerland

ivan.sekulic@usi.ch
isekulic.github.io

EDUCATION

Università della Svizzera italiana, Faculty of Informatics, Switzerland
PhD Student — March 2020 – present

- Supervisor: Fabio Crestani
- Working on Conversational Information Retrieval

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 Intern — 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

Reasoning with Latent Structure Refinement for Document-Level Relation Extraction
Guoshun Nan, Zhijiang Guo, **Ivan Sekulić**, Wei Lu — 2020

- We tackle the problem of document-level relation extraction by inducing the latent document-level graph, enabling the relational reasoning across sentences. We reach 59.05 F1 on DocRED.
- To appear in *Proceedings of ACL 2020*

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;
- Published 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, Rugby