


## EDUCATION


**University of Zagreb, Faculty of Electrical Engineering and Computing** **October 2020 – June 2022**  
*Master of Science in Computer Science* *Zagreb, Croatia*

- thesis:  Time-to-Event Prediction: Current Trends in Machine Learning
- advisor: Prof. Bojana Dalbelo Bašić
- **GPA: 5.0 / 5.0**, rank: 1-2/347, *summa cum laude*

**KTH Royal Institute of Technology** **August 2020 – January 2021**  
*Visiting graduate student, Erasmus+ exchange* *Stockholm, Sweden*


- **GPA: 5.0 / 5.0**

**University of Zagreb, Faculty of Electrical Engineering and Computing** **October 2017 – July 2020**  
*Bachelor of Science in Computer Science* *Zagreb, Croatia*

- thesis:  Optimization of Neural Networks for Predicting Properties of Silicene Nanoribbons (in Croatian)
- advisor: Assoc. Prof. Mirko Poljak
- **GPA: 4.5 / 5.0**, rank: 20/407

**Relevant coursework:** Probability | Statistics | Machine Learning | Deep Learning | Probabilistic Graphical Modelling | Natural Language Processing | Data Mining | Randomized and Approximation Algorithms

## PUBLICATIONS

F. Rajič, I. Stresec, A. Marmet and T. Poštuvan, "Using Focal Loss to Fight Shallow Heuristics: An Empirical Analysis of Modulated Cross-Entropy in Natural Language Inference", *arXiv preprint*,  *arXiv:2211.13331*, 2022

T. Župančić\*, I. Stresec\* and M. Poljak, "Predicting the transport properties of silicene nanoribbons using a neural network," *2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO)*, 2020

\*Equal contribution.



## RESEARCH EXPERIENCE

**Machine-Learning-Based Survival Analysis and Prediction** **September 2022 – Present**  
*Independent researcher* *Zagreb, Croatia*



- developing a reliable and interpretable machine-learning-based survival prediction framework for small datasets (nested cross-validation, Shapley additive explanations)
- collaborating with liver transplantation experts from the Merkur Clinical Hospital in Zagreb

## PROJECTS



**Dots, Do We Need Them? Significance of Punctuation in Irony Detection** **April 2021 – July 2021**  
*University of Zagreb, Faculty of Electrical Engineering and Computing* *Zagreb, Croatia*

- implemented several neural network models commonly used in NLP (RNNs, CNNs, LSTMs) and demonstrated that including punctuation significantly improves irony detection performance
-  project report (authors sorted alphabetically);  GitHub

**[RE] Variational Autoencoder with a VampPrior** **October 2020 – January 2021**  
*KTH Royal Institute of Technology* *Stockholm, Sweden*

- successfully reverified the empirical findings in *VAE with a VampPrior* (Jakub M. Tomczak et al.), showing the effectiveness of VampPrior and the suggested hierarchical architecture
-  project report (authors sorted alphabetically);  GitHub

**Variational Inference for Covid-19** **October 2020 – January 2021**  
*KTH Royal Institute of Technology* *Stockholm, Sweden*



- derived algorithms for probabilistic graphical models (EM, VI)
-  lab report;  assignment definition

## The Travelling Salesman Problem

KTH Royal Institute of Technology

September 2020 – November 2020

Stockholm, Sweden

- devised a competitive C++ solution of the 2D version of TSP using diverse algorithms (Christofides, 3-opt, Clarke-Wright, Lin-Kernighan)
-  project report;  GitHub

## SCHOLARSHIPS AND AWARDS

### Josip Lončar Bronze Plaque award

University of Zagreb, Faculty of Electrical Engineering and Computing

November 2022

Zagreb, Croatia

- recognition of excellence for both years of graduate studies (**top 1%**)
- special commendation for the best graduate student who participated in an Erasmus+ exchange

### Excellence scholarship

University of Zagreb

2021, 2022

Zagreb, Croatia

- merit-based scholarship granted by the University of Zagreb

### Josip Lončar recognition

University of Zagreb, Faculty of Electrical Engineering and Computing

November 2021

Zagreb, Croatia

- recognition of excellence for the first year of graduate studies (**top 1%**)

### Erasmus+ KA103 SMS scholarship

University of Zagreb, Faculty of Electrical Engineering and Computing

May 2020

Zagreb, Croatia

- merit-based scholarship granted for the Erasmus+ exchange program

### STEM scholarship

Croatian Ministry of Science and Education

2018, 2019, 2020

Zagreb, Croatia

- merit-based scholarship granted by the Croatian Ministry of Science and Education

## WORK EXPERIENCE

### Full stack developer, intern

Croz d.o.o.

July 2019 — October 2019

Zagreb, Croatia

- developed an internal progressive web app with push notifications
- employed Java SpringBoot and Typescript Angular technologies
- agile project management using Scrum and Kanban board methodologies


## ADDITIONAL EDUCATION

### SPOCK startup incubator

University of Zagreb, Faculty of Electrical Engineering and Computing

January 2022 – July 2022

Zagreb, Croatia

- learned startup development fundamentals through hands-on workshops and lectures ([more info](#) )
- topics covered include ideation, prototyping, market research, business models, and VC funding
- developed a prototype for portfolio management, stock price forecasting, and algorithmic market making

## COMPETITIONS

### CoderOne 2022: Mission to Mars

Ivan Stresec (team name: SigmaGo)

September 2022

- an annual AI competition for designing game AI hosted by CoderOne ([more info](#) )
- placed 6th out of 33 registered teams

### TraderHack 2022

Ivan Stresec\*, Edin Pjević\*, Ivan Modrušan\*, Niko Kravica\*

April 2022

- a 24-hour algorithmic trading hackathon hosted by Optiver ([more info](#) )
- placed 3rd out of 111 registered competitors; won a prize of €3000

\*Equal contribution.

## SKILLS

**Programming languages** Python, C/C++, Java

**Libraries and frameworks** PyTorch, Scikit-learn, Pandas, XGBoost, TensorFlow

**Tools** Git, L<sup>A</sup>T<sub>E</sub>X

**Languages** English (C2), German (elementary), Croatian (first language)