


## EDUCATION

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**Delft University of Technology (TU Delft), The Delft Bioinformatics Lab** **October 2023 – Present**  
*Doctor of Philosophy in Bioinformatics* *Delft, Netherlands*

- advisor: Asst. Prof. Joana Gonçalves
- topic: multimodal machine learning for molecular maps of human tissue


**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

**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

## PUBLICATIONS

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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

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**Delft University of Technology (TU Delft), The Delft Bioinformatics Lab** **October 2023 – Present**  
*PhD candidate* *Delft, Netherlands*

- advisor: Asst. Prof. Joana Gonçalves
- working on multimodal machine learning for molecular maps of human tissue

**University of Zagreb, Faculty of Electrical Engineering and Computing** **April 2023\* – October 2023**  
*Junior researcher* *Zagreb, Croatia*



- advisor: Prof. Bojana Dalbelo Bašić
- working on machine-learning survival prediction
- collaborating with liver transplantation experts from the Merkur Clinical Hospital in Zagreb

\*Started working on the project unofficially in July 2022. Remained unemployed from July 2022 until April 2023.



## PROJECTS DURING STUDIES

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**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** September 2020 – November 2020  
*KTH Royal Institute of Technology* 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

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**Josip Lončar Bronze Plaque award** November 2022  
*University of Zagreb, Faculty of Electrical Engineering and Computing* 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** 2021, 2022  
*University of Zagreb* Zagreb, Croatia

- merit-based scholarship granted by the University of Zagreb

**Josip Lončar recognition** November 2021  
*University of Zagreb, Faculty of Electrical Engineering and Computing* Zagreb, Croatia

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

**Erasmus+ KA103 SMS scholarship** May 2020  
*University of Zagreb, Faculty of Electrical Engineering and Computing* Zagreb, Croatia

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

**STEM scholarship** 2018, 2019, 2020  
*Croatian Ministry of Science and Education* Zagreb, Croatia

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

## OTHER WORK EXPERIENCE

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**Full stack developer, intern** July 2019 — October 2019  
*Croz d.o.o.* 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

## EXTRA-CURRICULAR ACTIVITIES

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**SPOCK startup incubator** January 2022 – July 2022  
*University of Zagreb, Faculty of Electrical Engineering and Computing* 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

## TraderHack 2022

April 2022

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

- 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.*

## COMPETITIONS

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### CoderOne 2022: Mission to Mars

September 2022

*Ivan Stresec* (team name: *SigmaGo*)

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

## TraderHack 2022

April 2022

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

- 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

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<b>Programming languages</b>	Python, C/C++, Java
<b>Libraries and frameworks</b>	PyTorch, Scikit-learn, Numpy, Pandas, XGBoost, TensorFlow, Matplotlib
<b>Tools</b>	Git, L <sup>A</sup> T <sub>E</sub> X
<b>Languages</b>	English (C2), German (elementary), Croatian (first language)