

WORK EXPERIENCE

RealNetworks Inc., Zagreb, Croatia

Data Scientist Intern - Development of acoustical and linguistic models for robocall detection

Jul 2021 – Aug 2021

- researched various deep learning methods for speech classification and recognition using both NLP (transformers) and computer vision (CNNs) approaches
- acquainted myself with various dimensionality reduction and data visualization methods (t-sne, PCA, k-means, SVD)

Koncar – Power Plant and Electric Traction Engineering Inc., Zagreb, Croatia

Software Engineering Intern

Jul 2020 – Aug 2020

- developed a GUI Client for network communication via Modbus protocol
 - Python, Git, Linux
 - Python specific libraries used: PyQt, Asyncio

Koncar – Power Plant and Electric Traction Engineering Inc., Zagreb, Croatia

Software Engineering Intern

Jul 2019

- developed a web application for real time tracking and management of data on a SCADA based wind turbine systems
 - Javascript, HTML, CSS, Python, Git

Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

Undergraduate Teaching Assistant in *Fundamentals of Electrical Engineering* course

Feb 2019 – Jul 2019

- assisted students during laboratory examinations throughout the semester

EDUCATION

Aalto University, Helsinki, Finland

MSc in Acoustics and Audio Technology

Sep 2021 – Jun 2023
(expected)

- minor: Machine Learning, Data Science and Artificial Intelligence
- relevant courses: *Speech Processing, Speech Recognition, Methods of Data Mining, Machine Learning, Deep Learning, Audio Signal Processing, Communication Acoustics*

Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

BSc in Computer Science

Sep 2018 – Jul 2021

- BSc thesis: Contrastive Unpaired Translation using Focal Loss for Patch Classification (arXiv preprint - <https://arxiv.org/abs/2109.12431>)
- BSc project: analyzed impact of hyperparameters and different architectures in deep neural networks on their performance using CIFAR-10 dataset
- interests: deep learning, DSP, audio processing, computer vision, sound reproduction, speech recognition
- relevant courses: *Linear Algebra, Mathematical Analysis 1 and 2, OOP in Java, Probability and Statistics, Statistical Data Analysis, Physics, Information Processing, Algorithms and Data Structures, Design Patterns, Discrete Mathematics 1, Artificial Intelligence*

III. gymnasium, Zagreb, Croatia

Mathematics & Natural Sciences Department

Sep 2014 - Jun 2018

VOLUNTEERING

III. gymnasium, Zagreb, Croatia

Workshop organiser

April 2018

- organised and held workshops for students on the topic of drug abuse and crime prevention among youth

MAJOR ACHIEVEMENTS

UNODC Youth Forum 2018.	Participated as a representative of Croatia at an international youth forum in Vienna, Austria organised by the United Nations Office on Drugs and Crime in March of 2018.
STEM Scholarship	Received a scholarship for being among the top students on matriculation exam in fields of Mathematics and Physics

TECHNICAL SKILLS

Intermediate	<ul style="list-style-type: none">• Python – used in various university courses, during internships, for making a C compiler and both for a project on Deep Neural Networks and BSc thesis (Python specific libraries used: PyTorch, NumPy, scikit-learn, matplotlib, Pandas, asyncio, PyQt...)• C++ – used in the university course <i>Introduction to Programming, Algorithms and Data Structures</i> and <i>Design Patterns</i>• C – used in the university course <i>Introduction to Programming</i> and <i>Design Patterns</i>• Java – used in the university course <i>Object Oriented Programming</i>• GIT – used for managing and storing both personal and work related projects• Linux – used as a primary OS• Ableton Live – used for personal music projects
Basic	<ul style="list-style-type: none">• R – used for a project in <i>Statistical Data Analysis</i> course• SQL, SQLite, PostgreSQL – used in various university courses and during internships• Bash, Perl – used for <i>Scripting Languages</i> course• Web technologies - Javascript (& Vue.js), HTML, CSS – used during the first internship and both in <i>Web and Mobile Software Development</i> and <i>Software Design</i> (used to make a web app for laundry services in student campuses) university courses

OTHER SKILLS AND INTERESTS

Languages	Croatian (native), English (fluent - C2 (TOEFL iBT 114/120)), German (basic), Italian (basic)
Interests	Deep Learning, Artificial Intelligence, Machine Learning, Acoustics, Music Production and Sound Design, Guitar and Piano playing