

*Profile will be available until 26 June 2025*



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Published author and bioinformatician: two books in Serbian language, one translation from Romania to Serbian (Autoput A4 i druge pesme, L. M. Baros), and several scientific papers (including Prediction and Classification Models for Hashimoto Thyroiditis Risk Using Clinical and Paraclinical Data published at the ECE European Congress, Machine Learning Predictive Models Applied to COVID-19 Datasets to Estimate the Risk of Infection in Specific Geographical Regions presented at the AI Conference of SYNASC, and An Authentic Algorithm for Ciphering and Deciphering Called Latin Djokovic at the ICKSE Conference). A web application: XAIBOT, Explainable Artificial Intelligence Trilingual Chatbot was published in 2021 by the West University of Timișoara, as a part of TRAIN Hub. Participation at the European Computer Science Summit held in Edinburgh, UK.

Programming competitor: ICPC Southeast European Regional Contest in 2020/2021, 2022) and several other local, national (Romanian Collegiate

Programming Contest), and international (Catalysts Coding Contest, Google Hash Code) contests.

Babuc achieved the EurAI award for my scientific contributions in the field of artificial intelligence. Babuc achieved the Best Presentation award for the paper approaching the

Latin Djokovic algorithm. Babuc also won the Best Paper award at the International Conference on Bioinformatics and Bioengineering.



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## WORK EXPERIENCE

### Adjunct Teaching Assistant

02/2022 – Current

Computer Science Department of the West University of Timișoara |

 Timisoara, Romania

Developed and implemented engaging lesson plans that improved student comprehension.


Collaborated with teachers to develop assessments and evaluate student performance.

Utilized a variety of technologies to create interactive learning experiences for students.

### Developer Volunteer

06/2020 – 10/2022

Signal, Image Processing, and Machine Learning Team |

 Timisoara, Romania

Developed a multilingual erudite and intelligent chatbot.

Developed a machine learning model that accurately predicted application usage patterns and trends.

Authored a research paper on a variety of topics, including natural language processing.

Implemented a scientific experiment of the machine learning predictive models on COVID-19 datasets to estimate the infection risk in certain geographic regions.

## Group Project Volunteer

02/2020 – 06/2020

Nokia |  Timisoara, Romania

Developed project plans that included timelines, milestones, and resource allocation to ensure successful project completion of real-time information about a server with notifications.

Developed and maintained spreadsheets to track project progress, enabling accurate declaration of project status.

Identified and resolved project issues in a timely manner to ensure successful project deliveries.

The team leader of the project.

## EDUCATION AND TRAINING

### West University of Timisoara

10/2023 – Current

PhD Candidate, Mathematics and Natural Sciences, Computer Science |

 Timisoara, Romania[Hide details](#) Level in EQF: **EQF level 8**

### West University of Timisoara

11/2023 – 07/2024

Teaching and Learning Brand |  Timisoara, Romania[Hide details](#) Level in EQF: **EQF level 7**

### Faculty of Mathematics and Computer Science, West University of Timișoara

09/2021 – 07/2023

MSc Bioinformatics (Valedictorian)

 Timisoara, Romania


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Level in EQF: **EQF level 7**

## Department for the Preparation of Teaching Staff, West University of Timișoara

09/2024 – Current

Second Level of Didactics

 Timisoara, Romania


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Level in EQF: **EQF level 7**

## Faculty of Mathematics and Computer Science, West University of Timișoara

09/2018 – 07/2021

Computer Science

 Timisoara, Romania

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Level in EQF: **EQF level 6**

## Department for the Preparation of Teaching Staff, West University of Timișoara

09/2021 – 07/2022

First Level of Didactics

 Timisoara, Romania

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Level in EQF: **EQF level 6**

## Gimnazija "Mihajlo Pupin"

09/2014 – 06/2018

High School: General Profile


 Kovacica, Serbia

[Hide details](#) 

Level in EQF: **EQF level 5**

## Școala Generală "Sfântul Gheorghe"

09/2006 – 06/2014

Elementary School |  Uzdin, Serbia[Hide details](#) Level in EQF: **EQF level 4**

## PUBLICATIONS

### **EDoViT-Alz: Alzheimer's Disease Identification with Vision Transformer Using Extremely Downscaled MRI Data**

2024 | [https://link.springer.com/chapter/10.1007/978-3-031-76462-2\\_10](https://link.springer.com/chapter/10.1007/978-3-031-76462-2_10) | Babuc, D., & Fortiș, A. E. (2024, November). EDoViT-Alz: Alzheimer's Disease Identification with Vision Transformer Using Extremely Downscaled MRI Data. In International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (pp. 109-120).

### **A novel ensemble learning technique of shallow models applied on a COVID-19 dataset**

2024 | [https://annals-csis.org/Volume\\_39/drp/pdf/8981.pdf](https://annals-csis.org/Volume_39/drp/pdf/8981.pdf) | Babuc, D. (2024, September). A novel ensemble learning technique of shallow models applied on a COVID-19 dataset. In 2024 19th Conference on Computer Science and Intelligence Systems (FedCSIS) (pp. 537-542).

### **A Customizable Intelligent System for Cervical Cytology Image Classifications**

2024 | [https://link.springer.com/chapter/10.1007/978-3-031-70011-8\\_8](https://link.springer.com/chapter/10.1007/978-3-031-70011-8_8) | Babuc, D., & Fortiș, A. E. (2024, July). A Customizable Intelligent System for Cervical Cytology Image Classifications. In International Conference on Complex, Intelligent, and Software Intensive Systems (pp. 82-93).

### **Fine-Tuned CNN for Clothing Image Classification on Mobile Edge Computing**

2024 | [https://link.springer.com/chapter/10.1007/978-3-031-57942-4\\_8](https://link.springer.com/chapter/10.1007/978-3-031-57942-4_8) | Babuc, D., & Fortiș, A. E. (2024, April). Fine-Tuned CNN for Clothing Image Classification on Mobile Edge Computing. In International Conference on Advanced Information Networking and Applications (pp. 65-75).

### **An Authentic Algorithm for Ciphering and Deciphering Called Latin Djokovic**

2023

### **Prediction and classification models for Hashimoto's thyroiditis risk using clinical and paraclinical data**

2023 | <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=10522713> | Corlan, A. S., Babuc, D., Costi, F., & Onchis, D. (2023, September). Prediction and classification models for Hashimoto's thyroiditis risk using clinical and paraclinical data. In 2023 25th International Symposium on SYNASC (pp. 251-255).

## DIGITAL SKILLS

Python (obspy, keras) |  
 Programming Languages - C,C++,Java,HTML and MS SQL server |  
 SQL (MSSQL, PL/SQL, MySQL) | MySQL, SQL, SQLite, PostgreSQL |  
 Linux (Terminal Commands, Bash/Shell) | GIT version control, Linux Command |  
 Microsoft Office | Devops: Docker, Jenkins | Platform : AWS Cloud |  
 Back-end (Flask, Django) | Multiple PHP (Laravel) Projects | Jinja2 Template |  
 Deploying with Streamlit | Text processing (Word, LaTeX) | Visual paradigm |  
 Draw IO | HTML, JavaScript, MySQL, NGINX | NodeJS (TS & JS)

## LANGUAGE SKILLS

### Mother tongue(s)

**Romanian, Serbian**

### Other language(s)

	Listening	Reading	Spoken interaction	Spoken production	Writing
<b>English</b>	C1: Proficient User	C1: Proficient User	C1: Proficient User	C1: Proficient User	C1: Proficient User

	<b>Listening</b>	<b>Reading</b>	<b>Spoken interaction</b>	<b>Spoken production</b>	<b>Writing</b>
<b>French</b>	<b>B1:</b> Independent User	<b>B1:</b> Independent User	<b>B1:</b> Independent User	<b>B1:</b> Independent User	<b>B1:</b> Independent User
<b>Spanish</b>	<b>A2: Basic</b> User	<b>A2: Basic</b> User	<b>A2: Basic</b> User	<b>A2: Basic</b> User	<b>A2: Basic</b> User

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