

Curriculum Vitae of Juraj Dončević

Currently affiliated with:

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Summary / Statement

Motivated researcher with a keen interest in diverse areas within **software engineering, including software architecture, software design, data management, bidirectionalization, and functional programming**. Proficient in various programming languages and technologies. In 2024, he defended his Ph.D. thesis "Extension of the mediator-wrapper architecture for heterogeneous data source integration by adding a mask".

Education

Gymnasium Bjelovar, Mathematics and sciences, Bjelovar, Croatia

Student, 2007 to 2011

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

Ph.D., Computer Science, 2024

M.Sc., Software Engineering, 2018

B.Sc., Computer Science, 2016

Academic Employment

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

Assistant 2018 - 2024

Senior Assistant (Postdoctoral) 2024 -

Academic Service

Professional Membership

Institute of Electrical and Electronics Engineers, Member (2018)

Publications

Journal Articles

1. Dončević, J., Fertalj, K., Brčić, M., & Kovač, M. (2024). Mask--Mediator--Wrapper architecture as a Data Mesh driver. *IEEE Transactions on Software Engineering*. <https://doi.org/10.1109/TSE.2024.3367126>

2. Dončević, J., Fertalj, K., Brčić, M., & Krajna, A. (2023). Mask--Mediator--Wrapper: A Revised Mediator--Wrapper Architecture for Heterogeneous Data Source Integration. *Applied Sciences*, 13(4), Article 4. <https://doi.org/10.3390/app13042471>
3. Krajna, A., Brcic, M., Lipic, T., & Doncevic, J. (2022). Explainability in reinforcement learning: Perspective and position (arXiv:2203.11547). arXiv. <https://doi.org/10.48550/arXiv.2203.11547>

Conference Articles

4. D. Mlinarić, V. Mornar & J. Dončević, "Ranking model for dormitory admission process," 2022 45th Jubilee International Convention on Information, Communication and Electronic Technology (MIPRO), 2022, pp. 1088-1092, doi: 10.23919/MIPRO55190.2022.9803654.
5. Dončević, J., & Fertalj, K. (2020). Database Integration Systems. 2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO), 1617–1622. <https://doi.org/10.23919/MIPRO48935.2020.9245245>

Projects

1. NPOO Proof of Concept: RANMI - Representation and analysis of mining data using artificial intelligence methods, researcher and development lead, 2024-2025;
2. NPOO Proof of Concept: Litre - Natural language analysis and machine learning for a systematic literature review, researcher, 2024-2025;
3. Erasmus + T.E.S.T. - Technologies for STE(A)M Teaching, researcher, 2022-2024;

Research interest

Software architectures

Software design

Data management

Functional programming

Bidirectionalization

Category theory

Type theory

Teaching Experience

Introduction to robotics

Lecturer, Winter school of informatics,

2007 - 2010

Association of Informatics of Bjelovarsko-bilogorska županija

Introduction to programming

Teaching Assistant, FER, University of Zagreb

Winter 2018 - Summer 2024

Development of software applications

Teaching Assistant, FER, University of Zagreb

Summer 2018 -

Information systems

Summer 2018 -

Teaching Assistant, FER, University of Zagreb
Advanced Algorithms and Data Structures
Lecturer, FER, University of Zagreb

Winter 2024 -

Technical Knowledge

- Programming languages: C#, Python, F#, Rust, C, Haskell, Java, Javascript
- Frameworks: .NET (ASP, WPF), Django, Flask, Tauri, Spring, Express.js
- Databases: PostgreSQL, MSSQL, SQLite, LiteDb, MongoDB, MySQL
- Specialized libraries: ANTLR4, Selenium

Github: <https://github.com/JurajDoncevic>

Researchgate: <https://www.researchgate.net/profile/Juraj-Doncevic>

Languages

Native Croatian

Fluent English (C2)

German (B1)

October 1, 2024