PREDRAG FILIPOVIKJ | RESUME

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Current Position: Method Engineer, Scania CV AB
Interests and Expertise: Software Engineering, Formal Verification, Model checking,
SAT/SMT solving, Software Testing, Safety-critical Systems Engineering
Date of birth: 1989-01-16.
Citizenship: Sweden and North Macedonia (dual citizenship).

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Summary

Software verification expert and with 7+ years of collaborative experience with the automotive domain. Areas of expertise: software engineering, automated reasoning and formal verification of safety-critical systems, software testing. I am very passionate about both the engineering and the science of building complex, correct and robust software systems. Broad areas of interest (to mention a few): systems design and architecture, programming languages and compilers, requirements engineering, model-based development. ISTQB certified Test Analyst.

Employments and Working Experience

Method Engineer - Scania Group, Sweden   Jan. 2021 - present

· A method engineer for the complete vehicle integration testing team. Responsible for improving the existing, and introducing new test methods for improving the test efficiency. Other significant contributions: test strategy implementation, test tools implementation and assessment, project risk assessment, etc.
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PostDoctoral Researcher - Kungliga Tekniska Högskolan (KTH), Sweden   Aug. 2019 - Dec. 2020

· A senior researcher and work package responsible in the AVERT VINNOVA project. (partners: KTH and Scania AB CV).
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Ph.D. Student and Researcher - Mälardalen University (MDU), Sweden   2013 - 2019

· Doctoral student in formal verification of automotive embedded systems. (partners: MDU, Scania AB CV, and Volvo Group Trucks Technology). Industrial PhD student @ Scania CV AB.
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Full Stack Software Developer - Nextsense, Ltd., Skopje, North Macedonia   2012 - 2013

· Initially part of a team of developers that were responsible for development, maintenance and deployment of proprietary content management system. Subsequently promoted to team leader.
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Education

Ph.D. (Teknologie Doktor) - MDU, Västerås, Sweden   2014 - 2019

· Doctoral Thesis: Automated Approaches for Formal Verification of Embedded Systems Artifacts.
· Advisors: Assoc. Prof. Cristina Seceleanu and Dr. Guillermo Rodriguez-Navas.
  Faculty opponent: Prof. Jim Woodcock, University of York, UK.

Licentiate (Lic. i Teknologie) - MDU, Västerås, Sweden   2014 - 2017

· Licentiate Thesis: Pattern-based Specification and Formal Analysis of Embedded Systems Requirements-and Behavioral Models
· Advisors: Assoc. Prof. Cristina Seceleanu and Dr. Guillermo Rodriguez-Navas.
  Faculty opponent: Prof. Stefania Gnesi, ISTI-CNR, Italy.

MSc. in Software Engineering, GPA: 5.00 of 5 - MDU, Västerås, Sweden   2012 - 2013

· One year master program in software engineering at Mälardalen University.
Thesis: Connecting a Design Framework for SOSs with UPPAAL model-checker. Supervisor: Dr. Aida Causevic, examiner: Assoc. Prof. Cristina Seceleanu.

MSc. in Computer Networks and E-technologies, GPA: 9.98 of 10 - Ss. Cyril and Methodius University, Skopje, North Macedonia
2011 - 2014

· A master program focusing on network analysis methods and internet technologies in general. Thesis written and published in Macedonian language (available upon request).

Technical Skills

Programming Languages	C, C++, C#, Java, JavaScript, Python, Rust, SQL
Modeling	Temporal Logic, Simulink, UML, SysML, Timed/Hybrid Automata
Tools	UPPAAL, Z3, CANalyzer

Certifications

ISTQB Certified Tester Advanced Level Test Analyst (**CTAL**)
2022

ISTQB Certified Tester Foundation Level (**CTFL**)
2021

Publications

I have published more than ten peer-reviewed publications, which have been included in the proceedings of highly ranked international conferences and journals. Complete list of publications.

Honors and Awards

Ericsson Research Grant - Ericcsson Research Foundation
2017

· The research grant was awarded for funding my research visit to the Software Modeling and Verification Group (MOVES), RWTH Aachen University, headed by Prof. Dr. Ir. Dr. h. c. Joost-Pieter Katoen.

Best Research Paper Award - ACM SIGAPP 32nd ACM SIGAPP Symposium On Applied Computing (SAC2017)
2016

· Paper title: *"SMT-based Consistency Analysis of Industrial Systems Requirements"*

Best Student Presentation and Research Proposal - 43nd International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2017)
2016

· Paper title: *"Increasing Embedded Systems' Quality through Automated Specification and Analysis of Requirements and Behavioral Models"*

Languages

English	Swedish	Macedonian
Full professional proficiency	Intermediate	Native

Volunteering and Community Service

Local Arrangements Team Coordinator - IEEE International Conference on Software Testing, Verification and Validation (ICST)
2018

· Managed a group of ten volunteers responsible for handling different supportive services such as technology, registration and information desk, cocktail and dinner event support, etc.

Local Arrangements Team Member - IEEE Computer Society Signature Conference on Computers, Software and Applications(COMPSAC) and IEEE/ACM Automated Software Engineering (ASE)
2014

· Part of a group of volunteers responsible for handling different supportive services for the conference.

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