



A senior Scala developer with 5 years of professional experience in programming. Passionate about concise, readable and testable code. Strong proponent of functional programming.

Above all, I am interested in working on projects that intrigue me. These are some key intriguing factors: **challenging algorithms**, **new technologies**, a "make the world a better place" work domain.

You can find out more about me by following the links below.



Email [zzmaric@gmail.com](mailto:zzmaric@gmail.com)  
Skype [zzmaric](#)

## SKILLS

Scala	████████████████████
Play	████████████████████
PostgreSQL	████████████████████
MongoDB	████████████████████
Git	████████████████████
SBT	████████████████████
TDD	████████████████████
Agile dev	████████████████████
Java 8	████████████████████

## LANGUAGES

Croatian	████████████████████
English	████████████████████
Hungarian	████████████████████
German	████████████████████
Portuguese	████████████████████

## NOTABLE PROJECTS

**discavo.de** at **Discavo** as **senior software engineer**, April 2015 - Present

A hotel meta-search website. The system serves a platform for searching and comparing hotel offers from various online travel agents (OTAs, e.g. Booking, Expedia, Agoda, etc.). The challenges include searching through enormous amounts of offers from dozens of heterogeneous OTA APIs and providing the best results in a timely fashion.

The other side of the challenge is in maintaining a unified, consistent database of all hotels, i.e. identifying equal hotels from a large variety of different providers, based on often faulty data.

**Responsibilities:** Researching big data solutions for the BI database (Hadoop family, Google BigQuery), implementing features and improvements throughout our technology stack. This mostly involves backend development, but also includes system architecture, database design, and frontend development.

**Technologies:** Scala, Play 2.4, MongoDB, PostgreSQL, Akka, Specs2, Docker, Atlassian Bamboo, NodeJS, React, AWS, Elasticsearch

**Blink** at **Amphinicy Technologies** as **lead developer**, Mar 2014 - Mar 2015

An R&D project aiming to replace existing expensive hardware solutions for high speed processing of satellite telemetry data with an efficient software solution. I implemented a highly-parallel implementation of Reed-Solomon decoding on a GPU. For GPU programming, I used the **Rootbeer** Java GPU compiler.

**Responsibilities:** Researching, measuring, optimising, and documenting relevant results on performance-critical segments of the data processing pipeline.

**Technologies:** Rootbeer, CUDA, GPGPU, JUnit/EasyMock, Java Executor Framework, Guava, Maven, Mercurial, Jenkins, SonarQube, Redmine

**ADS-B PROBA-V** at **Amphinicy Technologies** as **lead developer**, Oct 2012 - Dec 2013

A prototype project for air traffic tracking via satellite receivers. Amphinicy was in charge of the entire ground solution. This included real-time decoding and persisting of air traffic data, encoded in various formats by terrestrial and satellite receivers, and generating reports based on performance comparison of terrestrial vs. in-orbit receivers.

**Responsibilities:** Implementing decoders with thorough unit testing. Implementing efficient report generation logic by leveraging advanced DB queries. Implementing report presentation logic. Tight cooperation with the customer.

**Technologies:** JUnit/EasyMock; PostgreSQL/PostGIS; JasperReports; JBoss7: remoting, HornetQ; REST; JSON; Java Executor Framework, Guava, Hibernate, Maven, Mercurial, Jenkins, SonarQube, Redmine

**MUSCADE** at **Amphinicy Technologies** as **lead developer**, Jan 2011 - Dec 2012

A prototype multimedia platform delivering interactive 3DTV content broadcast via satellite. The solution included server side, set top box and mobile device software and 3DTV games.

**Responsibilities:** Implementing set-top box OSGi components for content fetching, caching and application lifecycle control. Implementing a rich mobile controller application. Implementing a 3D EPG for display on 3D TVs. Implementing backing web services. Agile project management. Technology and feature consulting.

**Technologies:** Java, OSGi, OpenGL, jMonkeyEngine, Android, JSF 2.0, XSLT, C#, C++, UPnP, NASA World Wind, Blender, Maven, SVN, Jenkins, GForge

## WORK EXPERIENCE

**Discavo**  
Senior Software Engineer  
Apr 2015 - Present  
Berlin, Germany

**Amphinicy Technologies**  
Software Engineer  
Jan 2011 - Mar 2015  
Zagreb, Croatia

**PUC Campinas**  
University Assistant Intern  
Oct 2010 - Dec 2010  
Campinas, SP, Brazil

## EDUCATION

**University of Zagreb**  
Computer Engineering  
M. Sc. 2008 - 2010  
B. Sc. 2005 - 2008

M. Sc. thesis in GPGPU-enabled HD video encoding: "Implementation and Optimisation of Intra-Frame Prediction in the H.264 Standard"  
B. Sc. thesis in computer graphics: "Simulation of Fracturing a Brittle Object".  
**Notable courses:** Multimedia Architectures, Distributed Software Development, Object-oriented Programming, Machine Learning, Discrete Mathematics

# ABOUT

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## Added Value

I avoid starting work on a task before having a sufficient comprehension of the big picture. This gives me a pragmatic approach to problem solving, allowing more accurate estimation and balance between the quality and feasibility of a solution.

I excel at quickly comprehending new code and finding my way through new codebases. In the same manner, I am fast at learning new technologies and paradigms. To get a better idea of the way I think, see my activity on [StackOverflow](#).

My wit and positive attitude inspire a good mood and a pleasant ambiance with co-workers. This induces an additional sense of cohesion in teams I take part in.

## Professional Interests

I wish to work in an environment that can afford to produce high quality software; and one that holds this practice in high esteem. I admire - and practise - test driven development and, more importantly, design for testability.

## Personal Interests

There are very few things that I do not find interesting. Perhaps my most keen interest and life goal lies in sustainability and the environment. In the long term, I wish to take significant part in designing solutions that reduce the degrading impact of civilisation on the environment.

Besides this, I am passionate about linguistics, etymology and music.