

## CONTACT

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## SKILLS

### GENERAL:

- Software Engineering
- Languages/Compilers
- Software Verification
- Security
- Machine Learning

### LANGUAGES:

- Common Lisp
- Racket
- Java
- Python
- Rust
- Haskell

### SYSTEMS/TOOLS:

- Linux
- git

# LUKA HADŽI-ĐOKIĆ

hgluka.net

## SUMMARY

A software engineer with a mathematical bend and lots of personal projects, open source contributions and self-directed research under his belt. Interested in and passionate about programming languages, software verification, functional programming and many other topics.

## EDUCATION

**Bachelor of Mathematics & Computer Science**  
**Faculty of Mathematics, University of Belgrade**

2016 - ongoing

Current Status: One year left. 8.5 out of 10 GPA.

## WORK EXPERIENCE

**Software Engineer**  
**4Create**

Feb 24 - ongoing

Worked on a project involving clinical studies in an agile environment by configuring them with Java and XML to fit their specifications. Performed technical interviews and helped onboard new team members.

**Software Engineer**  
**Atlas**

Jun 23 - Oct 23

Worked on Nyxt, the hacker's browser written in Common Lisp. Implemented new history import functionality from other browsers, worked on rewriting the settings front-end and back-end. Did bug fixing and maintenance.

**Research Intern**  
**IMDEA Software Institute**

Oct 21 - Apr 22

Worked on an algorithm that decides the inclusion between  $\omega$ -visibly pushdown automata. Implemented omegaVPLinc, a prototype tool written in Java using this algorithm and performed experiments to compare it to existing solutions.

**Software Engineering Intern**  
**Seven Bridges Genomics**

Jul 19 - Oct 19

Worked with a team of interns on an internal management platform written in Java. Used the Spring framework on the back-end to make a microservice-based web application.

## PUBLICATIONS

**Antichains Algorithms for the Inclusion Problem Between  $\omega$ -VPL**  
**Kyveli Doveri, Pierre Ganty, Luka Hadži-Đokić**

DOI

TACAS 2023. Lecture Notes in Computer Science, vol 13993

## ACHIEVEMENTS

### SCC 2021

#### Third place

Part of the third place team at the Serbian Cybersecurity Challenge 2021 CTF.

### Cyber Education Day 2020

#### First place

Part of first place team at CTF organized by CRDF Global in 2020.

### Descon Hackaton 2018

#### First place

Part of first place team at Descon Hackaton in 2018. The project consisted of a very cheap air pollution sensor that sends data via MQTT.

### BSPEE 2016

#### Honorary mention

Honorary mention won outside of the main competition at the Baltic Sea Philosophy Essay Event, regional qualifiers for the Philosophy Olympiad in Finland and Norway.

## PROJECTS

### omegaVPLinc

#### Java

An implementation of an algorithm that checks for inclusion between two  $\omega$ -VPAs using quasiorders and antichains.

[Project page](#)

### procsland

#### Racket

A procedural island map generator based on cellular automata. Written in Typed Racket as proof of concept to be used in a future game project.

[Project page](#)

### bark-lang

#### Nim

An interpreter for a Forth-like language, developed as part of an independent research project about synthesizing Forth programs.

[Project page](#)

### Robin Hood

#### Rust

2D game in which you play as Robin Hood, trying to rob a castle before you're caught by guards.

[Project page](#)

## EXTRAS

- Contributed to the Racket Programming Language.
- Contributed to the BeeWare project.
- Enjoys reading fantasy almost as much as technical documentation.
- Loves playing board games.