

Professional Summary

Highlights PhD in mathematics, experienced software developer, Linux power user.

Skills Team leadership, backend development, apps and database design, code reviews and tests.

Experience Academic research, software development and teaching. E-commerce backend development.

Interests Code, algorithms, and DB queries optimisation for efficiency, robustness, and reusability.

Technical Proficiencies

Programming Python, Django, Flask with SQLAlchemy, PIL, ImageMagick, VimScript, PostgreSQL, Celery, PHP, HTML, CSS, JavaScript, Perl, C, bash shell scripting, MySQL.

Productivity Vim/Gvim, Git, GIMP, Inkscape, L^AT_EX, B_IB_TE_X, Beamer, Swagger, LibreOffice.

OS Linux (advanced), Microsoft Windows, HP-UX.

Experience

2016-2022 **Senior developer**, *Kite/Prodigi*, London, UK.

- Lead developer for e-commerce platforms.
- Took over development and maintenance of Kite Shopify app (later: Prodigi Shopify App), made significant overhaul, upgrades, and performance improvements.
- Envisioned, designed, lead, supervised, and participated in the development of a pluggable “one app to rule them all” for multiple e-commerce platforms.
- Took over a project for generating product images, upgrading the functionality and improving the speed 3-5 times.
- Set up and maintained Heroku projects and Linode servers.
- Note: Kite got acquired by Prodigi in 2019, but my duties remained the same.

2012–2015 **Research visitor**, *The University of Manchester*, Manchester, UK.

- Performed research in numerical linear algebra with development of the supporting code.
- Proposed and delivered [Programming with Python](#) course which is [still being taught mostly unchanged and with my materials](#).
- Designed and wrote *Coursework marker*, a program for semi-automatic marking of students' final project.
- Developed, prepared Jupyter materials, and delivered a highly praised one day Python course aimed at experienced researchers and developers at [NAG](#), covering OOP, MATLAB via SciPy emulation, unit testing, interfacing C and FORTRAN, and other advanced topics.

2001–2012 **Research associate**, *The University of Zagreb*, Zagreb, Croatia.

- Taught, marked, and prepared materials for *Programming in C*, *Web programming*, *Data structures and algorithms*, *Programming in Pascal*, and general computer courses.
- Wrote a 300-page manuscript for *Programming in C*, which is still the official manuscript.
- Mentored students working on web programming projects and numerical mathematics.
- Designed, coded, and maintained a fully automated PHP engine for generating students' homework assignments and marking their uploaded source codes and other solutions, used for programming courses and numerical mathematics from 2007. until 2018.
- Developed [MetPot](#) and [Decision](#), applications supporting my research in decision theory (server no longer active).
- Installed and maintained several research, web, and mail servers, mostly under RedHat Linux, later replaced by Fedora; some under Debian. Still maintaining one of them.

Education

2006–2009 **PhD in numerical linear algebra**, *The University of Zagreb*, Zagreb, Croatia.

2001–2006 **Magister Scientiae (MPhil equivalent) in mathematics**, *The University of Zagreb*, Zagreb, Croatia.

1995–2000 **Graduate engineer (MSc equivalent) in mathematics**, *The University of Zagreb*, Zagreb, Croatia, Major: Computer science, graduated in top 10% of my class.

Fun Projects

[PyPI projects](#) Django Loggers Test, Settings Collector, How I Got Here, Unidecode Replace, Deep Vars, Call Args, Test Imports

[PyteArt](#) Collection of generators of ASCII art with overlapping characters, written in Python.

[aMaze](#) JavaScript labyrinth game.

[Minesweeper](#) Version of the classic game written as a JavaScript class.

[SlowSorts](#) Two algorithms, opposite of QuickSort.

[Regex X-word](#) I solved all of them.

[MDtoc](#) A Vim plugin for easy creation of Markdown ToC for files and directories.

Volunteering

2013-present **Member of Stack Exchange**.

- Among top 3% users on Mathematics (for undergraduate and graduate mathematics), top 5% on CodeReview (for people wanting to improve their already working programs), top 3% on Movies, and I occasionally participate on StackOverflow (for programming inquiries).

2012-2013 **Webmaster**, [Manchester SIAM Student Chapter](#), Manchester, UK.

2002-present **Forum administrator**, *The University of Zagreb*, Zagreb, Croatia.

- Installed and maintained "[Forum@DeGiorgi](#)", a web forum aimed at helping mathematics students.
- Made many significant code changes.