

# Nikola Panajotovikj | MSc Bioinformatics

[Email](#)

[GitHub](#)

[Website](#)

[LinkedIn](#)

## EDUCATION

### University "Pompeu Fabra" in Barcelona, Spain

Sept 2022 - present

MSc Bioinformatics

- *Current average grade:* 9.13 / 10
- *Key Modules:* Python, Computer Assisted Drug Discovery, and Web Development.

### University "Ss. Cyril and Methodius" in Skopje, N.Macedonia

Sept 2018 - Jun 2022

BSc Molecular Biology and Genetics at the Faculty of Natural Sciences and Mathematics

- *Summa cum laude:* 9,91 / 10
- *Key Modules:* Molecular Biology, Biochemistry, Genetics, Genetic Engineering, Cellular Biology, Immunology & Biology of Cancer.

## TOP EXPERTISE

My biggest strengths are [OOP and Python](#).

- [Python](#)
- [R](#)
- [Django \(html, css, sqllite\)](#)
- [SQL](#)
- [Others and tools:](#) Chimera, VMD, DataWarrior, Charmm, Docker, Excel, C++, Perl, RubyOnRails.

## RELEVANT PROJECTS (to see all please check [webpage](#) or [github](#))

### [LigandMapper.py](#) - Python

Mar 2023

Created a python standalone program that takes as input a pdb file and returns the predicted sites for ligands to bind to the protein - ligand binding pockets. It also returns files for visualization of the pockets in Chimera and PyMol. ([documentation](#), [example video](#))

### [Projects of data analysis and machine learning](#) - Python and R

Mar 2023

### [SQL exercises](#)

Mar 2023

Solutions for SQL problems from the book: Practice Problems: 57 Beginning, Intermediate, and Advanced Challenges for You to Solve Using a "Learn-by-Doing" Approach by Vasilik, Moestl Sylvia

### [Hospital Management WebApp \(code, live\)](#) - Django (python)

Jan 2023

Developed of a web application for use in a hospital setting. The application enables hospital staff to input patient details into a database, which patients can then access through personalized profiles.

### [Phylogenic and Chip-Seq analysis of OLIG2](#) - R

Dec 2022

Analyzed the phylogeny and domains of OLIG2, as well as its expression in cerebral cells using t-SNE. Additionally, conducted a ChIP-Seq analysis to investigate OLIG2 as a transcription factor.

### [Modern and Innovative Education in Biology \(BioInEdu\)](#)

Apr 2021 - Jul 2022

Project Financed by The Ministry of Education and Science, carried out at the University "Ss. Cyril and Methodius". Developing and conducting educational assessments and experiments in a laboratory setting, as well as researching and translating publications for educational purposes.

## EXPERIENCE (reference letters available upon request)

### Researcher - Research Center for Genetic Engineering and Biotechnology "Georgi D. Efremov" - Macedonian Academy of Sciences and Arts

Jan 2022 - Sep 2022

Worked with Molecular Genetics: Whole exome sequencing (NextSeq 550 Illumina) & Third generation sequencer (MiSeq personal sequencer, Illumina) and others (Genetic Analyzer, Real-Time PCR system, Bioanalyzer).

**Teacher's Assistant - Department of Physiology and Biochemistry, Faculty of Natural Sciences and Mathematics** **Sept 2021 - Dec 2021**

Oversaw and facilitated practical work for subject Basics in Biochemistry. Supervised eight 2-hour groups weekly. Introduced students to experiments and provided guidance and assistance during lab work. Evaluated performance through observation and supervised exams.

**Laboratory Technician - Genetics Lab - Department of Genetics, Faculty of Natural Sciences and Mathematics** **Jun 2020 - Aug 2021**

Assumed administrative responsibilities in a teaching capacity, including processing student files, creating exam copies, and supervising exams. Offered individualized consultations to students when required.

**SCHOLARSHIPS & AWARDS**

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- **University Tuition Fee Waiver for High Academic Achievements** **2019 - 2022**
- **Scholarship of the Ministry of Education and Science for Intellectually Gifted Students** **2019 - 2022**

**FOREIGN LANGUAGES**

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**English** - Cambridge English Level 3 Certificate in ESOL International (Advanced: C1 A, equivalent to C2; Reference No. 173MK0015014)

**French** - B1 level of understanding

**Spanish** - A2 level of understanding

**Serbian, Bulgarian and other Slavic languages** - passive knowledge

**SOFT SKILLS**

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- Strong organizational and critical thinking abilities.
- Detail-oriented.
- Skilled at multitasking in fast-paced environments with precision.
- Quick learner, self-sufficient once oriented.

**ADDITIONAL SKILLS, HOBBIES & INTERESTS**

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**Microsoft Office:** Proficient in Word, Excel and PowerPoint

**Video Editing:** Highly experienced in Sony Vegas Pro Editing Software

**Advertising:** Experienced with Facebook and Instagram Advertising