

Nikola Panajotovikj | MSc Bioinformatics

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EDUCATION

University "Pompeu Fabra" in Barcelona, Spain

Sept 2022 – present

MSc Bioinformatics

- *Key Modules:* Python, Data Mining and Data Integration, Databases and Web Development.

"Ss. Cyril and Methodius University" in Skopje, North 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](#).

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|----------|--|-----------|
| • Python | • Django (project , exercises) | • Excel |
| • R | • php (clustal website) | • Tableau |
| • SQL | • HTML | • C++ |

PROJECTS

Hospital Management WebApp – Django ([GitHub](#))

Jan 2023 – present

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.

Phylogenetic and Chip-Seq analysis of OLIG2 ([GitHub](#))

Oct 2022 – Dec 2022

Led a team of four in the analysis of the phylogeny and domains of OLIG2, as well as its expression in cerebral cells using t-SNE. Additionally, conducted a chip-seq analysis to further investigate OLIG2 function.

Modern and Innovative Education in Biology (BioInEdu)

Apr 2021 – Jul 2022

Project Financed by The Ministry of Education and Science. Mentored by Biljana Miova, PhD and Natalija Atanasova-Pancevska, PhD. Developing and conducting educational assessments and experiments in a laboratory setting, as well as researching and translating publications for educational purposes.

EXPERIENCE

Researcher – Research Center for Genetic Engineering and Biotechnology "Georgi D. Efremov" –

Macedonian Academy of Sciences and Arts

Jan 2022 – Sept 2022

Under the mentorship of Dijana Plaseska Karanfiliska, PhD.

- Worked with principal researcher to develop a pipeline in R for WES data.
- Also worked with: 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 – Biochemistry Lab – Department of Physiology and Biochemistry, Faculty of Natural Sciences and Mathematics

Sept 2021 – Dec 2021

Under the mentorship of Jasmina Dimitrova-Shumkovska, PhD; TA for subject Basics in Biochemistry.

- Oversaw and facilitated practical work, supervising eight two-hour groups weekly. Introduced students to experiments and provided guidance and assistance during lab work. Evaluated performance through observation and supervised exams.
- Involvement in research: "Assessment of antioxidant capacity of two medicinal mushrooms of the genus *Ganoderma*."

Laboratory Technician – Genetics Lab – Department of Genetics, Faculty of Natural Sciences and Mathematics

Jun 2020 – Aug 2021

Under the mentorship of Prof. Dr. Gordana Dimeska.

- Assumed administrative responsibilities in a teaching capacity, including processing student files, creating exam copies, and supervising exams. Offered individualized consultations to students when required.
- Involvement in research: "Cytotoxic and Genotoxic Effect of Insecticides, Pesticides, Supplements, etc. On the Apical Root Meristem of *Zea mays*."

LAB SKILLS

- **Molecular Genetics:** MiSeq (MiSeq personal sequencer, Illumina), Genetic analyzer (8-capillary Genetic Analyzer 3500 Applied Biosystems; and ABI PRISM 310), Real-Time PCR system (Fast Real-Time PCR System 7500 Applied Biosystems, ABI PRISM 7700 Sequence Detector), Microarray technology (DNA Microarray Scanner System Agilent), and Bioanalyzer (Bioanalyzer 2100 Agilent).
- **Molecular Biology:** Aseptic techniques; DNA and RNA isolation and quantification; PCR (Thermal Cycler); RT-PCR; qPCR; Electrophoresis.
- **Dry Lab:** T-Coffee, BioEdit, plasmid construction (SnapGene and CloneManager). Documentation of experiments: ELN & LIMS.

SCHOLARSHIPS & AWARDS

Scholarship of the Ministry of Education and Science for Studies outside Macedonia	2022 – present
University Tuition Fee Waiver for Exceptionally High Academic Achievements	2019 – 2022
Scholarship of the Ministry of Education and Science for Intellectually Gifted Students	2019 – 2022

FOREIGN LANGUAGES

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 (reading and understanding)

ADDITIONAL SKILLS, HOBBIES & INTERESTS

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

SOFT SKILLS

- Strong organizational and critical thinking abilities, detail-oriented, and skilled at multitasking in fast-paced environments with precision.
- Quick learner, self-sufficient once oriented.
- Methodical data recording and analysis skills.
- Professional and effective interpersonal communication and public speaking skills.