




Žiga Kovačič

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EDUCATION

Cornell University

Ithaca, NY

Bachelors of Science in Computer Science and Mathematics | **GPA: 4.22 / 4.3**

May 2026

λ **Relevant courses:** Intro to computing, Honors Object Oriented Programming and Data Structures (A), Digital Logic and Computer Organizations (A+), Linear algebra (A+).

λ **Ongoing:** Honors Discrete structures, Embedded systems, Probability, (Grad) Computation for content creation.

EXPERIENCE

Teaching Assistant - Academic Excellence Facilitator

Ithaca, NY

Cornell University

January 2023 - Present

λ Lead 2-hour workshops each week with a co-instructor for a Object oriented programming and data structures class.
λ Prepared worksheets, presentations, and implemented them in modern active learning approaches.

Software Engineering Intern

Slovenia

National Research Institute, Parallel Computing Lab

June 2022 - Aug 2022

λ Explored and evaluated methods for binding code from sizable C++ projects (maxCliqueSearch) to Python to make it more accessible to 10+ research teams to reuse.
λ Wrote detailed documentation on GitLab for using the C++ library and improved the program's help() function.
λ Tested and verified correctness of the C++ code base in a Linux environment to achieve expected functionality.

Software Engineering Intern

Slovenia

National Research Institute, AI Lab

June 2021 - Dec 2021

λ Collaborated in smart assistant development for oil refineries.
λ Formatted and processed data for further semantic classification using Transformers and NumPy frameworks.
λ Explored methods used to optimize semantic classification for speech recognition.
λ Learned NLP and ML fundamentals.

Research Intern

Slovenia

Department of EE and CS, University of Maribor

Nov 2020 - May 2021

λ Helped develop particle detectors in collaboration with CERN (European Council for Nuclear Research).
λ Used EGSnrc simulation software in Linux to program particle collisions for different materials and filter dimensions.
λ Explored optimal combinations of materials for minimised electron spread patters and accurate particle energy detection.

PROJECTS

WiiTutor (Founder)

Slovenia

Free online tutoring organization

Jan 2021 - Present

λ Developed a [website](#) using HTML, CSS and JavaScript to promote the project.
λ Used Google embeddings to share application forms, show booked time-slots on embedded Google Calendar, gather student feedback, and link to WHO Covid-19 donations website.
λ Helped 350+ students in understanding material and improved their test results, held tutoring sessions for groups & individuals, provided practice problems.
λ Offered free tutoring help to 10+ schools and an orphanage in Slovenia to mitigate effects of distance learning.

Simulating Evolving Artificial Life | Java

Oct - Dec 2022

λ Worked with a two partners to build a simulator game of a world where animals wander around, eat, reproduce, and evolve.
λ Build a parser that converts a critter program into an AST (abstract syntax tree) with context-free grammar.
λ Build an interpreter for the critter language using the visitor design patter and a simulator that maintains and changes the state of the model.
λ Build the game's GUI using JavaFX and tied the parser, interpreter, simulator, and the GUI into a functioning game using the MVC design patter.

PUBLICATIONS AND AWARDS

Material science and Chemical engineering research

Published in Oct. 2021

COBISS

Koraki v znanost

λ Influence of mass ratio between MTMS and solvent on the synthesis of monolithic flexible hydrophobic aerogels at STD.
λ Research award from international generic pharmaceutical company (Krka) for research work in the field of Material science.
λ Placed 2nd at the National Research Competition.

TECHNICAL SKILLS

Languages: Python, Java, C++, L^AT_EX, Markdown, HTML, CSS

Developer Tools: NeoVim, Git, Figma, Jupyter Notebooks, VS Code

Libraries: Numpy, JavaFX