

BERKAY BENLI

[LinkedIn](#) — [GitHub](#) — [Personal Website](#)

+1(780) 680-3211 ◊ Edmonton, AB

benli@ualberta.ca

EDUCATION

Bachelor of Science (Honours) in Computing Science, University of Alberta (expected Winter 2027)

Relevant Courses

- **Object Oriented Programming, Data Structures and Algorithms, Programming in C**, Calculus I, Calculus II, Linear Algebra

EXPERIENCE

UASTarr Alberta Rocket Research

Jan 2024 - June 2024

Software Team Member

Edmonton, AB

- Collaborated with team members to **design and develop the UASTARR website**, addressing bugs, implementing new features, and **enhancing overall functionality** to improve user experience.
- Contributed to the **development of the rocket tracker software**, **enhancing tracking accuracy by 12%** through the implementation of more **efficient tracking algorithms** such as **Kalman Filter Algorithm**, and **optimizing code efficiency**

PROJECTS

Sample-Searcher [App Link](#) — [Backend Code](#) — [Frontend Code](#) (React, NodeJS, Express, MySQL, Python)

- Developed **full-stack** music application using React and NodeJS/Express with MySQL database, integrating **Python web-scraped data** into a **MySQL database of over 2000 songs**.
- Implemented **user authentication** with cookies and bcrypt-secured Passwords, and enabled song viewing, playback, downloading, and favoriting, with **favorites saved in the database**.
- Created **RESTful API endpoints** for user management and song retrieval. Designed a **responsive UI** with **dynamic song display** and pagination.

Beat-Sequencer — [App Link](#) — [Source Code](#)

(Python, Pygame)

- Designed a Beat Sequencer using **Python** and **Pygame** with a **graphical user interface** with interactive buttons and sliders for beat creation, tempo adjustment, and dynamic grid of pads for composing beats.
- Implemented **sound mapping** and playback, allowing users to toggle pad states, create, play, and clear beats in real-time, with **adjustable difficulty modes**.
- Ensured a responsive user experience through precise mouse click detection and event handling.

EXTRA-CURRICULAR ACTIVITIES

- Competed in UAPC (**University of Alberta coding competition**) multiple times, the Beaver Computing Challenge (Mathematics Contest), and the **University of Waterloo Gauss Contest**, earning an **Honours with Distinction award**.
- Awarded **3rd place** in MecSimCalc **hackathon LIVE 2023**

SKILLS

Computer Skills and Languages: Python, C, MySQL, JavaScript, React, NodeJS, HTML, CSS, Latex, Microsoft Office, Google Suite. Fluent in English and Turkish