Amar Tabakovic

CONTACT INFORMATION	Private information available upon request	*E-mail:* tabakovicamar1@gmail.com
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EDUCATION

Bern University of Applied Sciences, Biel/Bienne, Switzerland   2021 – Expected 2024
Bachelor of Science, Computer Science
- Specialization in *Computer Perception and Virtual Reality*
- Bachelor thesis: *Implementation of a Real-time Streaming-based Terrain Level of Detail System* (in progress)
- Project 2: *3D Terrain with Level of Detail* (grade: A)
- GPA: 5.3 / 6.0 (unofficially calculated from ECTS grades)

PROFESSIONAL EXPERIENCE

Swiss Bankers Association, Basel, Switzerland   August 2020 – June 2021
ICT Intern
- Developed a modern version of the *QI-Toolkit*, an internal web application for looking up U.S. double tax treaties, using Laravel and MySQL.
- Participated in the cloud migration project of the Swiss Bankers Association.
- Maintained the WordPress-based intranet site.
- Conducted first and second-level support for internal and external clients.
- Supported the ICT Team in various organizational and technical matters.

PERSONAL PROJECTS

JLisp (work in progress)
Lisp interpreter in Java
- Developed an interpreter for a subset of the Scheme dialect of the Lisp programming language using Java.
- Used a hand-written recursive descent parser for parsing source code.

Graphs
Graph algorithm visualizer in JavaScript
- Wrote a web-based graph algorithm visualizer in JavaScript using the Canvas API.
- Implemented algorithms include depth-first search, breadth-first search and Dijkstra's algorithm.
- Supports generation of randomized graphs and dynamic visualization speed.
- Source code: `github.com/amartabakovic/graphs`, live demo: `graphs.amartabakovic.ch`

Sorts
Sorting algorithm visualizer in Vue
- Developed a web-based sorting algorithm visualizer in JavaScript using Vue.
- Implemented algorithms include bubble sort, selection sort, insertion sort, mergesort, quicksort, and more.
- Supports random shuffling of the input list and dynamic visualization speed.
- Source code: `github.com/amartabakovic/sorts`, live demo: `sorts.amartabakovic.ch`

EXTRACURRICULAR ACTIVITIES

BaselHack 2023, Pratteln, Switzerland   October 2023
Developed with 5 teammates a prototype for a new social media platform named *ReLive* for easy and distractionless sharing of event pictures, including automated tagging of users on pictures.
Technologies used: Spring Boot, SvelteKit, Flask, DeepFace, H2, Figma

BärnHäckt 2023, Bern, Switzerland   August 2023
Developed with 2 teammates a prototype for a secure anonymous messaging application for emotional first aid as part of the challenge *143 – NextGen Dargebotene Hand*.
Technologies used: SvelteKit, Socket.IO, Prisma, PostgreSQL, Figma

Skills   *Software development:* Java, C++, JavaScript, Python, C, PHP, Matlab, Haskell
          Frameworks and libraries: OpenGL, Maven, CMake, Node, Vue, Laravel
          Databases: MySQL, PostgreSQL, DynamoDB, SQLite
          Miscellaneous: HTML, CSS, Amazon Web Services, Git, Linux, Office 365, LaTeX

Languages   German (native), Bosnian (native), English (fluent), French (conversational, DELF B1)