

## EDUCATION

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**Bachelor of Computer Science** | Université Libre de Bruxelles, Belgium

- **Expected to graduate in September 2023**
- **Relevant Coursework:** Algorithms and Data Structures, Software Engineering and Project Management, Artificial Intelligence, Systems Administration, System Design and Development, Operating Systems, Databases, Networks and Information Theory

## SKILLS

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- Bilingual in English and French. Currently learning Dutch.
- Proficient in Python, Java and C++.
- Familiar with Linux, GIT/VCS, SQL, Excel, Kubernetes and Docker.
- Experienced in Agile software development methodologies and life cycles
- Basic exposure to React.js/JavaScript/HTML/CSS.
- Articulate presentation of ideas and confident speaking skills.
- Adaptable to ever changing and high-pressure environments.
- Possession of a valid driving license (Permis B)

## PROJECTS

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### Study Buddy

- Implementation of a flashcard study app that was conceptualized using the MVC design pattern.
- Focused on OOP principles, Xtreme Programming and teamwork to design, code and test an app over multiple agile iterations to meet (mock) client's expectations.
- Worked across architecture, designing both front-end using JavaFX and the back-end using Java and SQLite

### Algorithm to color graphs using only k-degenerate colors.

- Implementation of a coloring algorithm in  $O(n+m)$  time by taking advantage of the graph's degeneracy in Java
- Developed the algorithm from applying concepts that were solely derived from graph theory research papers.

### Game of Amazons

- Heavily modified chess variant programmed in Python with a Functional GUI designed using PyQt5.
- Can play against an artificial intelligence based on a minimax heuristic function.

### Decentralized Tournament Leaderboard Android App

- Node server that can be hosted that will store each "transaction" of a "match" to a decentralized peer-to-peer chain.
- Android app allows users to connect to the node as a peer, establishing a p2p connection with other users and can write transactions onto the chain. Features include ELO calculations, SHA-256 encryption unique to each user's private-key and a foolproof transaction creation.
- Emphasis on decentralization technology and networking.
- Designed using Android Studio, back-end coded in Java.

### Personal Portfolio Website

- Designed using the React framework, JavaScript, HTML, CSS that showcases a few of my projects – In development.  
<https://harsdua.github.io/portfolio/>

## PAST JOB EXPERIENCE

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**FIVE GUYS - Fast Food worker** | October 2021 - January 2022 | Brussels, Belgium

- Communicated and worked with a team under constant pressure.
- Interacted with clients on a regular basis in French and English

## ADDITIONAL REMARKS

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I am a Canadian residing in Belgium for my undergrad due to my desire to explore a new continent, culture and immerse myself in French. I am eligible to work in Belgium from July 1, 2023 – October 1, 2024, via the job search year permit, and part time throughout my academic year. I am very open to developing myself in any direction within the domain of computer science. Although I have no experience, I am very eager to learn, and I catch on quickly. I love to work in teams, but I am quite independent. I have an interest in the business side of things and economics.

**Interests:** philosophy, Dutch and French, psychology, classical music, economics, hiking, writing, ice skating and cooking

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