2020, Computer Science, Churchill College

In pursuing a career in Computer Science (CS) I hope to live out my inherent passion for abstract thinking and problem solving, and to apply my skills to real-life challenges.

I am passionate about mathematics. Since 6th grade, I participated in 2-3 weekend maths camps each year. I explored proof methods by solving beautiful problems (connected to e.g. game theory or cardinality). It was also an opportunity to meet enthusiastic peers and dedicated organizers, most notably Lajos Pósa, the founder of the camps, who helped and taught me a lot.

I applied to the specialised maths class of Fazekas Mihály Grammar School, regarded as Hungary's most prominent school in mathematical education. I enjoyed studying maths (with special emphasis on number theory and combinatorics) in 8 classes a week in the inspiring environment of exceptionally talented classmates. This year I enrolled in Mathematics BSc at Eötvös Loránd University. I was admitted to Bolyai College, an institution aiming to facilitate the studies of prominent students of the Natural Sciences Faculty.

I am the most enthusiastic about the parts of CS requiring thinking and creativity. I learnt about competitive programming algorithms (e.g. Kosaraju, Maxflow) and data structures (e.g. Union-Find, Segment Tree), both autonomously and at the weekly IOI preparatory course.

This September I participated in CampIT, Poland. I had the chance to practice algorithmic problem-solving at the daily 4-hour contests in an international company.

I competed with success in National Olympiads both in CS and Maths (I was among the top 10-20 from 2011 to 2019). My best results include: 18th place in the National IMO (International Mathematics Olympiad) qualification contest; 2nd place in the Arany Dániel National Olympiad in Maths; 17th and 19th place in the CEOI and IOI qualification contests.

I qualified to the on-site finals of the Innopolis Open Olympiad in Informatics in 2018. I am keen to work in teams: we won the Bolyai Team Competition twice and I participated in the Italian Mathematics Olympiad of Teams, 2018.

I pursued further extracurriculars related to CS. With my school peers, we worked on an event organising application, using localization and Google Maps API to plot nearby events and verify attendance. Our meetings improved my coding skills (regarding UX principles, version control systems) as well as my ability to work in a team, manage conflicts, and appreciate others' ideas.

In a year-long mentorship scheme organized by Miklós Danka - a former CS student and supervisor in the UK - my teammate and I developed a scheduling application to help organize the finals of a Hungarian contest.

I also completed two internships at a software company. I worked on an internal full-stack project (using Angular.JS & SPRING Framework) and the optimisation of a pharmaceutical software. In this industrial setting, I gained experience regarding code guidelines, OOP, and refactoring.

This summer I investigated a novel centrality measure in Network Science in the research group of Péter Csermely, PhD, involving network embedding using SciPy and NumPy.

In 2018, I started to learn about neural networks on Coursera. I have also read about more recent techniques, e.g. neural attention. My immediate goal is to try to apply my knowledge in a practice project, possibly related to NLP.

I also enjoy teaching: I was a helper in Pósa camps, I tutored students individually, and lead a study group with my classmates for freshly applying students to Fazekas.

I am an open and curious person in social settings; I like to play sports, dance, meet new people and learn about foreign cultures and languages.

The chance of studying CS at a UK university would leverage my ability to contribute to important projects in industry or academic research because of the highly applicable and valuable knowledge acquired and the stimulating community resembling those of the weekend camps and my school.