

Solving logic tasks and puzzles by pursuing fast, easy and clear solutions has always fascinated me. Dealing with more complex problems, I keep trying to decompose them into subproblems and to apply my previous knowledge of ideas or models. These days the role of technology is rapidly growing, so algorithms and structures determine our world. Those who master computer science are creating our future. While I definitely wish to be one of them, I intend to continue my studies in mathematics as well, which is the basis of CS.

I attend Hungary's number one grammar school where our education is heavily focused on maths in a motivational atmosphere, with 7-8 maths lessons a week. Competing has always been a great pleasure for me. I received 7th prize in the Junior Mathematics National Olympiad (Arany Daniel) in 2015. I gained the following results in prestigious, Olympiad-type national competitions: 4th and 10th place in Kalmar Laszlo (2012, 2013) and 10th in Varga Tamas (2013). I came 6th, 8th and 10th in the nation-wide Zrinyi Ilona Maths Competition (2009, 2010, 2012). I also took part in physics, chemistry and computer science competitions. Each year since 2013 I achieved honourable mention by regularly solving the maths problems of Mathematical and Physical Journal for Secondary Schools, and this year my goal is to contest in its Informatics section as well. I was invited to maths camps for the most talented students organised by mathematician Dr Lajos Posa every semester for 6 years. In these camps, we cover several questions in graph theory, infinity, and cryptography. Here I also learned that besides great solutions, defining new problems and thinking outside the box could move science forward.

I fell in love with computer science a few years ago, by learning the basics of Pascal and C++ languages along with useful algorithms, like binary and interpolation searching, or bubble, quick, insertion and merge sorting. My first programs were to solve maths tasks related to Pascal's Triangle, recursive series or finding certain primes. I studied Harvard's CS50 online available course on my own, where my favourite part was about speech recognition. I took the high-level Matura exam in information technology, and achieved the best mark, one year earlier than required. I also attend non-school related seminars where I was introduced to the basics of Haskell language, sound processing in Python, dynamic programming and graph algorithms like DFS and BFS. This summer I had the opportunity to be an intern at NNG, a multinational software development company, presenting iGo. Being a member of a UX Division Team, I had an insight of how a code can be created by the cooperation of hundreds of people. Adding some small features in C++ and XML to the project was an amazing experience. I used here the 'find something similar – reproduce and further develop – self check' principle.

My parents founded a programming school for children, today having more than 6000 students. When it started in 2014, I had a huge role in writing the syllabus and creating example tasks. In our summer camps I teach coding in Scratch language. Also, in my school I tutored talented 6th grade students in mathematics.

I have played volleyball competitively since 2012, currently in the Hungarian National League. The ability of being persistent or increasing my capacity for hard work is essential in order to achieve academic success. As a team captain, I was also taught to be responsible for others.

I would like to study in the UK because I believe its unique higher education system is the best environment for achieving academic results, where my passion for CS and maths can develop into professional knowledge.