

I am fascinated by the world of logic, where everything has a rational explanation drawing on axioms. Contrary to reality, the realm of computer science (CS) and maths prevails this rule. Whenever I have the chance I can't wait to submerge in this world, exploring new concepts, acquiring as much knowledge as possible, and with the hope of eventually creating a tiny novelty to advance the science of maths or computing.

Since a young age, I have been fond of solving maths problems, seizing every chance to do so at extra classes, such as the IMO preparation sessions. I go to the maths specialized class of Fazekas High School, the #1 school for mathematics in Hungary, where we have 7 to 8 Maths classes a week and many additional task discussions with classmates. This atmosphere motivated me to attend competitions. Regarding olympiad-style national contests, I came 3rd in Arany Daniel (2017), 14th in Bataszeki (2015) and 9th with a commendation in Varga (2015). I qualified to the nationwide final of Zrinyi 4 times, once coming 15th (2017), and placed in top 10 in Kenguru national contest (2014,2017). Bolyai, the main team contest, brought the 6th place to my team in 2013. Last year I finished 7th in the national qualification of the European Girls' Mathematical Olympiad. Since 2014 I've been attending a maths camp series run by Lajos Posa, where the 35 most talented students of Hungary meet 3 times a year. I have also been mentoring my younger brother, who got an invitation to this camp. In 2018, I went to the 1-week summer camp, MaMuT, where the top 20 students are invited in each age group, based on competition results. In those camps, we learnt various proving tricks and were encouraged to find our own solutions and to divide tasks into already solved subproblems. My favourite topic was finding winning algorithms in strategy games. For the same reason, I like Go, the ancient Chinese game. I've been playing it competitively for 14 years, currently ranking 7 kyu, winning the Hungarian Schoolkids Championship in 2010, 2012 and 2017, the Junior Olympiad National Final in 2016, and gaining a bronze medal in the European Youth Team Championship in 2017. The multitude of step combinations and the infeasibility of finding a perfect strategy tests my creativity and strategic thinking. After a 4000-year hegemony of humans, Google developed AlphaGo, which now defeats the best players. This power of artificial intelligence prompts me to pursue a career, where I can use AI to assist in breaking down barriers of humanity.

I attend extracurricular CS-related courses, such as the Lego robot programming course, where I first met OOP, which later helped me structure my program code more efficiently. In 2016 I participated in a programming summer camp at Logiscool, developing games in Scratch for Android phones. Also, I like writing programs for maths problems instead of longer and error-prone calculations, the most basic example was summing finite series, one of my first codes. I take part in programming contests, where I can apply my C++ knowledge. I reached the 2nd round of OKTV (National Olympiad in Programming, 2018) and attend Codeforces contests. I passed the higher level Matura exam in CS already before my final year, scoring 91%. This summer I launched my project of translating English Wikipedia pages on the topic of CS, to Hungarian. By the already published Chan's algorithm, I understood the powerful concept of output-sensitivity as on practical sets of points, it is markedly faster than "normal" methods.

Drawing and sports help me clear my mind before studying. I played basketball competitively and I dance hip-hop. Challenging my logic, I won the national puzzle-solving contest 3 times with my grandma.

I would like to study in the UK owing to its top-quality higher education system, embedded in a lively and encouraging environment, which could help me discover the most fitting pathway for me.