I always enjoyed learning new things, especially if they had something to do with numbers. However, the first time when I realised that I want to study maths at university, and later work as a mathematician, was in 7th grade, due to my maths teacher, who made learning new concepts and solving problems a really fun and enjoyable process. I also benefited a lot from the enthusiasm of my physics teacher, who taught me concepts that were advanced for my age. Since then my intention to study maths has only grown stronger. Due to the impact of my teachers, I successfully applied to ELTE Apáczai High School - one of the best in Hungary - and hence moved to Budapest. In this school I had 11 lessons of both maths and physics each week, which I enjoyed a lot. In addition, I took private maths lessons to strengthen my problem-solving skills and general understanding of elemental maths. Moreover, I joined the Milestone Institute, a programme for talented students where I got used to solving maths problems in English and developed my knowledge in fields like multivariate calculus or game theory. As a result, I won one of Hungary's biggest maths competitions (the Arany Dániel Competition) and finished 8th and 9th in the semi-advanced and advanced categories of the most important correspondence maths competition (KoMaL) in two consecutive years. Based on these results I participated in the weekend and summer camps of Lajos Pósa, which are invitation-only, based on that year's maths competition results. In these camps pupils are introduced to maths in an unusual way: teaching concepts through problems of increasing difficulty and generality to master the usage of mathematical tools for competitions and research. With the help of my teachers there I applied to undergraduate and high school research opportunities. First, I joined a project at the Hungarian Academy of Sciences, and as a result I co-wrote a conference paper for AITP 2020, an artificial intelligence conference. As a result of this research we improved Google DeepMind's results at teaching a computer to perform basic mathematical problems in certain cases. The second project, at ELTE University, focused on graph polynomials, more precisely the chromatic, rank, flow and Tutte polynomials. My final work summarised general knowledge about the chromatic polynomial with my own proofs for the fundamental theorems. It won 1st prize in a high school maths essay competition and 3rd prize in the university's undergraduate research contest - mine being the only submission by a high school student. Apart from academic research, I worked as a student instructor at a programming school in my hometown for three years to convey my knowledge to others. In addition, I spent my last five summers (working eight to ten weeks each time) at a local company developing custom software for in-house usage, in languages like c++, python or Java. These projects helped me to understand many advanced concepts, such as clever ways to extract descriptive details from images or how to condense data into packets as small as possible. I usually worked alone

without any present suggestions about possible solution paths. In my free time, I have been playing the clarinet for nearly 10 years. Among others, I won gold prize in a Hungarian contemporary music competition last year and have been a finalist at multiple national orchestral competitions as principal and co-clarinettist. Unfortunately, these competitions were postponed because of the coronavirus. Furthermore, I also like to go sailing, mainly yacht sailing but also one-design monohull sailing, which requires much more physical and mental effort. I participated in several competitions too, usually finishing in the mid-range. Studying maths at a leading UK university is a long-held dream of mine because of the high standard and reputation, but especially because of the amount of knowledge, traditions and great opportunities I could gain.