PROCESS PAPER

My project, titled "Alan Turing's Mechanical Brain," details Turing's contributions to computer science and the modern field of artificial intelligence. Alan Turing's anachronistic ambitions led him to conceptualize some of the first computers and intelligent programs. In envisioning a mechanical brain, he revolutionized science and paved the road to a digital future.

I learned about Turing online and immediately decided to complete my project on him. However, it was not until several months in that I narrowed my topic down to simply his work on digital development. I worried that some judges viewing the website, having seen acclaimed film "The Imitation Game," would expect a focus on Turing's cryptanalysis work and the struggles of his homosexuality. Instead, I deliberately focused on his lesser known work, and avoided mentioning his sexuality as much as possible, as I feel many become overly obsessed with this aspect of his life. I was also worried judges may be confused or overwhelmed by my topic, which is why I chose to add a glossary and brief summaries at the bottom of every page.

As I researched, "quality over quantity" became my motto. I decided to focus less on the number of photographs and quotes I used and more on analysis, historical value, balance, and visual appeal. The design of my website, which I coded myself, was deliberately minimalist, drawing inspiration from past History Day winners *Jacob Riis and the Other Half* and *The Conscious of a Country: Herblock's Influential Ink Bottle*.

One of the most helpful methods I utilized in my research was keeping to-do lists and setting goals. At times, my list was over six pages long. Another thing I found helpful in my

research was getting my project reviewed by teachers, friends, and History Day veterans. This helped me polish my website and built my confidence that it was ready for competition.

Through my research, securing interviews became a frustrating process. Although I contacted over thirty experts, I was only able to secure three interviews. Despite this, the interviews I did complete were very helpful. In particular, I interviewed Ruth Bourne, who worked with Turing's bombe firsthand, Hugh Loebner, founder of the Loebner Prize, and Jack Copeland, an expert on Turing's work. In an unconventional way, I also interviewed several artificial intelligence programs, including a few that shocked me in how convincing they were.

Alan Turing is the epitome of a leader. Turing's envisionment of the Universal Machine and his contributions to the first computers essentially founded digital science. However, Turing's true legacy came in the form of a "mechanical brain:" his writings on thinking computers became the basis of artificial intelligence, a branch of science that has been expanding ever since. Thanks to Turing's work, we live in a world where computers have intelligence and machines have developed to be much more than simple calculators. It has been a pleasure to learn about Alan Turing and his work, and as always, History Day has been an enjoyable and educational experience.