Joyce Li jli5@imsa.edu Illinois Math and Science Academy

A healthy nation is a wealthy nation. The well-being of the citizens of the United States lies in the hands of, frankly, themselves. The activists who promote progress and prosperity. The engineers who create that which have never been. And lastly, the medical professionals that allocate years of their life to study, treat, and improve the physical well-being of their populations. Yet as America progresses with time, our healthcare system is failing the very people it was meant to serve: the public. More than 82 million people in this country have inadequate or no health insurance. As this number rises with the effects of the COVID-19 pandemic, this means that nearly one-third of Americans will live each day without the security of knowing that, if and when they need it, medical care is available to them and their loved ones. In order to double down on this problem, taking a look at the expensive costs of healthcare begins our process of problem-solving: identifying the problem. According to Insider Intelligence, 30% of healthcare costs are associated with administrative tasks. Though, there may be a way to tackle this 30%: the evolving field of Artificial Intelligence (AI).

There is a rising promise that healthcare technology can span its way into the administrative field of medicine because these tasks are solely data and fact-based. As AI continues to be more present in our everyday lives (Siri, Google Home, Alexa), the introduction of AI bots for healthcare facilities can not only reduce the cost of our expensive healthcare system, but also create a foundation for future improvements in the cost, maintenance, and accessibility of healthcare in the United States.

A functional AI bot in a healthcare facility would ideally be able to cover the administrative tasks that make up a whopping 30% of our nation's healthcare cost. AI can automate these tasks with its already present ability to analyze and produce results from a large data set, whether it's on patient records, data, symptoms, or even information like unpaid bills and authorizing insurance applications. The statistics to interpret data, coding to program the bot, and engineering principles to connect these two concepts together will help maintain these bots. Though the process of this innovation may be costly, the one-time implementation of these bots followed by low maintenance costs will positively affect the cost change we need in the long run, easing the workload of healthcare workers and ultimately saving money. Whether it's expanding health insurance or improving the quality of rural hospitals, these are all realistic applications of the allocated money we saved when we implemented AI in these administrative roles. The quick, novel nature of AI only allows for more improvement, and I firmly believe that I, working alongside the future generation in STEM, will be able to implement AI into the medical field to save more lives in a cheap, accessible, and widespread manner to every citizen in the United States. After all, a healthy nation is a wealthy nation.