I remember reading the news about USC launching a $1 billion-plus initiative for advanced computing, which is an emerging academic field that aligns perfectly with my academic interest. It intrigued me to carefully browse the official website of USC, and I was impressed by the flexible curriculum with a wide variety of courses for students to delve into specific disciplines of mathematics. Personally, I am particularly interested in studying data collection, classification, and Convolutional Neural Network models after taking some introductory courses in data science and marveling at the infinite possibilities that lie in this emerging field. My academic exploration continued as I collaborated with my classmates on a case study about the identification and categorization of coins using computer visualization methods. While writing a paper titled “*Brazilian Coin Counter Research Report*,” we designed based on the AlexNet Convolutional Model. It deepened my passion for expanding my math knowledge. Thus, I expect to take MATH 471: *Topics in Linear Algebra* and MATH 447: *Mathematics of Machine Learning* at USC.

Aside from absorbing advanced knowledge at USC, I also look forward to utilizing the abundant research resources provided for undergraduate students. Among the esteemed scholars at USC, I am most impressed by Professor Xiaohui Chen for his research focus on high-dimensional statistics, machine learning, and optimal transport. I would love to learn from Professor Chen and realize my academic potential if admitted.