

PERSONAL HISTORY STATEMENT

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<https://bik1111.github.io/>

As I once transformed the pain of discrimination I experienced during my school years into artistic expressions of value, I now aspire to harness cloud computing technologies to address societal challenges and contribute to technological advancement.

“You are too feminine.”

This was a phrase I often heard during my school years. As someone who passionately performed songs by female artists at school events like talent showcases during field trips or retreats, I was frequently labeled as different and criticized in a society governed by rigid gender norms. While these experiences left emotional scars, they also became the catalyst for my decision to major in theater and pursue acting as a means of self-expression and healing.

The process of staging a theatrical production has been one of the most fulfilling and meaningful experiences of my life. I spent countless hours reading and rereading scripts until the pages wore thin, tirelessly rehearsing lines with 20 teammates night after night, and meticulously refining stage movements to ensure the playwright’s intent was effectively conveyed. Though these efforts were grueling, the moment I reinterpreted the works of literary giants like Chekhov and Shakespeare in my own way, performing on stage and receiving applause from the audience, all the hardships transformed into pure joy and exhilaration. These experiences taught me how to turn moments of discrimination and pain into meaningful achievements, enabling me to transform adversity into a source of strength and growth.

However, the COVID-19 pandemic abruptly halted all opportunities for performance, leaving me with a profound sense of uncertainty about my future. During this period of ambiguity, I encountered a software application developed by a university student to trace the paths of COVID-19 patients. This application, used by over 42 million people, was born from the developer’s determination to combat the spread of misinformation and alleviate public fear by providing clear and accessible official information. Witnessing how this software brought clarity and reassurance during a time of crisis left a lasting impression on me. Deeply inspired by the positive impact of such technology, I resolved to dedicate myself to the field of computer science, aiming to address critical societal challenges and create meaningful change.

Transitioning from performing arts to computer science was not without challenges. My mathematical knowledge was limited to basic arithmetic, and tackling foundational university-level courses such as calculus, linear algebra, and engineering mathematics felt overwhelming. However, I was determined to develop software that could contribute meaningfully to society. For an entire year, I dedicated ten hours a day to mastering these subjects, and my efforts paid off when I was admitted to one of Korea’s top-ten universities.

Once enrolled, I independently studied backend development and participated in various hackathons, earning recognition for my work. Mentoring first-year students became a pinnacle of my growth, and deploying the software I developed to cloud environments while receiving enthusiastic feedback from peers sparked my initial interest in cloud systems. This interest led me to join organizations like AWS University Student Group (AUSG) and AWS Cloud Clubs (ACC), where I shared knowledge about various cloud services. While these experiences were immensely rewarding, they motivated me to delve deeper into the fundamental aspects of cloud computing systems, prompting me to apply for a research internship.

My internship at the System Software Laboratory at Korea University solidified my research aspirations. I had the opportunity to participate in a 6G network systems project, where I was responsible for summarizing related studies and presenting my findings to my advisor. This role honed my ability to analyze research papers, extract key insights, and communicate them effectively. In fact, one of the first research papers I

encountered explored reinforcement learning methodologies for designing optimal adaptive workload scaling policies for specific applications. Unlike my undergraduate studies, I found great motivation in addressing real-world problems with the potential to create meaningful societal impact.

These experiences instilled in me a profound awe for the potential of cloud computing. I recognized the transformative power of intelligent systems in achieving the performance goals of next-generation technologies. This realization marked a pivotal moment in shaping my long-term research goals and solidifying my commitment to this field.

My journey from the arts to computer science has been challenging, yet it aligns perfectly with the spirit of our era—a time when philosophy intersects with IT, science integrates with the humanities, and Eastern and Western thought converge. As Confucius said, “A true gentleman is not a tool” (君子不器), emphasizing the importance of transcending single disciplines and embracing diverse perspectives.

My experiences, combining the creativity of an artist with the analytical mindset of an engineer, resonate deeply with the University of Michigan’s values of diversity and inclusion. Through my studies in the humanities and arts, I gained a profound understanding of human complexity, while my research in the field of computer science reinforced my passion for addressing real-world challenges through innovative technologies. I look forward to advancing this mission as part of the University of Michigan’s graduate program.