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ABOUT ME

I am currently a first year Doctor of Pharmacy student at the Wayne State Eugene Applebaum College of Pharmacy and Health Sciences. Previously, I attended Waterford Mott High School and graduated in 2013. I graduated as the valedictorian with a weighted GPA of 4.17. After graduation, I attended Wayne State University for undergraduate education. I came into Wayne State with 24 credits earned from AP examinations in high school. I received a five, the highest score possible, on both Biology and Chemistry exams.

Coming into college, I applied and was accepted into the HealthPro Start program in the College of Pharmacy and Health Sciences. This program grants admission into the professional program of choice, mine being Pharmacy, with the stipulation that students maintain a 3.5 GPA and submit an application to the chosen program. HealthPro requires students to attend biweekly seminars on different healthcare fields in order to educate students on the field. I finished all three years of Pharmacy prerequisites with a cumulative GPA of 3.94, while maintaining good standing in both the Honors and HealthPro programs, and with no grade below an A-.

During undergraduate studies I volunteered in a translational medicine laboratory for cancer immunotherapy research at the Karmanos Cancer Institute. I primarily helped process patient blood samples and data for various studies. I maintained most of the tumor and T-cell cultures in the lab, utilizing biosafety cabinets and sterile technique. I helped conduct an in-vitro study of adoptive T-cell therapy for targeting glioblastoma and neuroblastoma.

Stemming from my research at Karmanos, I applied for, and was awarded a 2016 Fall/Spring/Summer Undergraduate Research award for my project *Improving Immunohistochemistry Scoring Techniques for Cancer Biopsies with Computer Vision Algorithms*. In this project, I independently developed a system of computer vision algorithms that can segment IHC-stained features in microscope images and quantify staining in a continuous (rather than ordinal) data format. The proposed procedure hopes to eliminate human bias, improve the speed of analysis, and obtain more quantitative (rather than qualitative) data for research and patient care.

In other previous research, I presented my project *Art & Architecture at the Detroit Public Library: The Bronze Doors* at the 2015 Fall Undergraduate Research Conference. In this project, I studied the bronze entrance doors to the DPL and sought to uncover lost information on the design, manufacturing, and artists who had created the doors. This research is being used by the DPL's Friends foundation to improve their public tours of the library and to renew public interest in the library and its resources.

In addition, last year I held the position of the President of the Wayne State chapter of the American Society for Microbiology, I have spent my three years in undergraduate studies as a part of this organization. ASM engages students in the science and research of microbiology and related fields through research presentations, journal club meetings, ASM-MI research conferences, and visits to sites like the Belle Isle Aquarium. It has been my personal goal to promote scientific literacy through this organization.

This previous summer I entered the HackWSU Hackathon, our team of two won second place in the advanced coders category for our project *EmotionEngine*. Our project used Python, OpenCV, and Scikit-Learn to create a webcam application that can detect faces and estimate the user's emotion based on a trained linear support vector machine. For training we modified a webcrawler to search Google and Bing for images of different emotion categories. This data was scaled down to 32x32 and fed through the SVM classifier. The face detection also grabbed faces from the webcam feed, scaled the images to the same dimensions and ran them through the trained classifier. The end product worked decently, but proved to be more of a novelty than anything.

I currently research in a laboratory that studies diabetes proteomics. I have a diverse set of responsibilities that range from meeting patients in the clinic and collecting data, to cell-culture laboratory techniques, and even writing software for bioinformatics and data analysis purposes. I really enjoy an environment of free thought, where I am not prevented from pursuing novel and cross-discipline ideas, where claims and actions must be backed by evidence, where reward is based on results instead of status, and where the only boundary to finding answers is your own innovation and persistence.
