

## 1. Academic History & Major Choice (Required)

I was diagnosed with type-1 diabetes three years ago, and devices like continuous glucose monitors (CGMs) and insulin pumps have had a significant impact on my life. Since then, I've made it my goal to advance diabetes technology in a way that improves people's health and quality of life. I applied to the College of Engineering intending to major in either Chemical or Biomedical Engineering. However, after considering the increasing relevance of computers in diabetes management, and discovering my interest in computation and technology, I now realize that majoring in Computer Engineering will best support me in achieving my goals.

As a condition of enrollment in the College of Engineering, I was placed into a program very similar to STARS called Engineering Dean's Scholars. As a result, all of last year I was stuck retaking introductory courses for which I had already earned AP credit. Autumn 2022, I was able to explore academically and found that topics related to computing particularly interested me. I performed well in four technical interviews using concepts I learned in CSE-143, and made a GIF generator using Python to help create visualizations for AMATH-352. Winter 2023, I petitioned into CSE-311, and it's already completely changed the way that I use logic when programming. Additionally, I am taking CSE 414, and have begun applying my new knowledge of SQL in my work with Syntext. Ultimately, I want to major in Computer Engineering because doing so directly serves both my career, and my interests outside the classroom.

## 2. Future Academic & Career Goals (Required)

My goal is to help develop the technology necessary for better closed-loop blood sugar management systems, which is when an insulin pump and CGM communicate with each other to make real-time adjustments to a patient's blood sugar. As this technology advances, computers will play an increasingly vital role in these systems; predictive models will replace human input to control the pump based on feedback from the CGM. After graduation, I plan to work as an embedded firmware engineer for a diabetes technology company. I've identified the skills that are most in demand for this role at companies like Dexcom and Insulet, and have tailored my intended coursework to acquire experience in systems programming with large-scale software development projects that will demonstrate my qualifications.

Additionally, I am deeply committed to using technology to improve quality of life for people with disabilities. Having both family and friends with physical disabilities, I've witnessed how impactful technology like screen-readers, specialized i/o devices, and configurable UIs can be. Therefore, I am eager to learn more about techniques for ensuring

accessibility, and to explore ways to overcome accessibility challenges with technology. So far, through my role with Nexus UW I've learned best practices for front-end development, including semantic HTML, and enabling keyboard navigation. Additionally, I am excited to join the Allen School's Ability, where I hope to both connect with other students who share this passion, and also help raise awareness for the importance and impactfulness of accessibility in software development.

### 3. Commitment to Community (Required)

Throughout my first year of college, I discovered my passion for teaching others through tutoring. As members of EDS, we all participated in workshops that served to lessen the gap between our educational backgrounds. Although I was fortunate enough to have had access to college level classes in high school, many of my friends in EDS weren't so lucky. I started tutoring a friend who was having a hard time in our EDS workshops, and soon realized that I enjoyed helping others understand difficult concepts. For the next two quarters, I continued to offer my assistance to anyone who asked for it in our workshops, and also privately tutored two other students. This experience led me to decide to take CSE-351 next quarter in order to pursue a TA position for Autumn 2023.

Last quarter, I and 6 other students formed a team to develop Syntext, a website for programmatic typing practice. My original goal was to improve my software development and teamwork skills, but I also ended up taking on the role of project manager. I've been utilizing pair-programming with team members of varying skill levels, and especially enjoy working with members who are new to software development to help get them up to speed in using Git, command-line tools, and Node.js. If admitted, I will continue to support my peers and facilitate a constructive learning environment as a future Allen School student.