

## **Mentor Visit Assessment #1**

**Name of Mentor:** Parmita Mishra

**Profession:** CEO of Precigenetics

**Location:** Facetime

**Date of Visit:**

**Time:**

### **Assessment**

Following up on the mentor email, Ms. Mishra wanted to jump on a call and go over the process together. In our call, I created a Voly account with Ms. Mishra and we drafted an email to Mr. Pirtle to finalize the mentorship arrangement. Now that it was finally done, we then talked about my next steps regarding this mentorship.

I will be 3D modeling a prototype for Precigenetics with Mr. Ahmed Nahas, which includes the development of my CAD skills. Ms. Mishra assured me that, as the head of the company, she would mentor me in understanding the general landscape of the biomedical engineering industry. According to her, one must know how the industry works if one aims to thrive in it. She even went as far as connecting me with the company's CTO, and we concluded that I should attend weekly meetings and take notes from what happens within the industry.

Networking and working with professionals in the biotech industry showed me that corporate culture is somewhat relaxed, which I never thought it would be. Most of the conversations happen over the phone in a friendly and informal way, which works for me. I work much better in a casual setting where I can think more creatively and understand concepts better. This comfort level extends to asking questions and interacting with my mentor, which has been a valuable part of the experience. Ms. Mishra is someone whom I really look up to because of all that she has achieved at such a tender age, and also for the great professional network she has built up which will be very useful to me.

Ms. Mishra gave me homework to prepare for our next meeting: a one-pager on how inefficiencies in the hospital environment affect surgeons financially. One of the important takeaways from our discussion was the constant need for cost optimization within a healthcare setting. Most often, hospitals suffer financial stresses due to disappointing technologies, scheduling mistakes, and many other facets which involve time and money wastage. My study

presented me with some alarming levels of financial losses caused by such issues, and I calculated such data to represent the problem.

That experience taught me that innovation in biomedical engineering is not just about new technologies, but also about refining existing processes to be more efficient at lower costs. This is important because it underlines the intersection of engineering with business, showing how financial considerations drive technological advancement in the healthcare sector. These dynamics definitely play a part in further understanding biomedical engineering and mechanical engineering, as both curricula require an individual to maximize efficiency and effectiveness through the designed solution.

The amount of money lost due to outdated systems and scheduling errors floored me-something that does not appear overly difficult to adjust yet continues in many hospitals today. That was very encouraging and motivating, since it again pointed out that small improvements in technology can have massive effects on health outcomes and healthcare costs. It also made me wonder how different hospitals approach these issues and whether there are standardized solutions being implemented across the industry.

This is directly relevant to my career aspirations, since it shows the incorporation of business principles into engineering. In the future, I want to design solutions that improve patient care and make medical systems more financially sustainable. By understanding inefficiencies in hospitals, I can develop innovations that will have real value for healthcare professionals and institutions alike.

Learning about the financial constraints in hospitals opens up opportunities to explore healthcare consulting, medical device development, and other areas where engineering and business intersect. It also makes me curious about how startups in the biomedical field secure funding and bring cost-saving solutions to market. These insights will shape my approach to problem-solving in my future career.

My next steps include continuing my research on cost-saving innovations in healthcare, refining my one-pager to propose viable solutions, and participating in discussions during the weekly meetings for a better understanding of the challenges faced within the industry. I also intend to improve my CAD skills with Mr. Ahmed Nahas in order to be capable of contributing effectively to prototype development for Precigenetics. As such, I would like to use this mentorship to hone my technical abilities further and also focus on strategic thinking for innovation in biomedical engineering.