

Student's Name

Professor's Name

Course Name/Code

Date

Autobiography of a College Student Pursuing Engineering

My name is Jessica Rivera, and I am currently in my third year of Mechanical Engineering at ABC University in Austin, Texas. I grew up in San Antonio, the eldest of three children, in a household where things that broke were fixed rather than replaced. My father was a mechanic, and our garage was a permanent landscape of dismantled engines, tools lined up on pegboards, and the particular smell of motor oil that I still find oddly comforting. I spent a significant portion of my childhood in that garage, handing him tools I was too small to use myself, asking questions he answered with patience he probably did not always feel.

By the time I was eight, I was taking apart things that were not broken just to see what was inside. Remote controls, old radios, a cordless phone that had stopped holding a charge. My mother was less enthusiastic about this habit than my father was. Most things went back together successfully. Some did not. I kept a notebook of the ones that did not, drawing diagrams of where I thought I had gone wrong, which is perhaps the earliest evidence that I was going to end up an engineer whether I planned to or not.

High school confirmed it. I excelled in physics and mathematics, not because they were easy but because they were the first subjects that felt like they were actually explaining the world rather than just describing it. I joined the school's robotics team in my sophomore year and stayed for three years, eventually serving as team captain. We competed at state

level twice. We never won, but we came close enough both times that losing felt instructive rather than discouraging, which is probably the best thing a competition can teach you.

I chose Mechanical Engineering at ABC University because of its robotics research programme, which is one of the strongest in the state. What I did not expect when I arrived was how much the programme would expand my understanding of what engineering actually is. I had thought of it as applied physics — forces, materials, mechanisms. And it is that, but it is also thermodynamics at two in the morning before an exam, and team projects where five people have five different approaches and you have to find the one that works, and professors who ask you to defend your assumptions before they will let you proceed. It has been harder than I expected and more interesting than I hoped.

My current focus is on soft robotics — systems that use flexible, compliant materials rather than rigid components, which makes them safer to operate around humans and more adaptable to unpredictable environments. I am working as an undergraduate research assistant in the university's robotics lab, where my specific project involves the actuator design for a robotic gripper intended for use in surgical assistance. The work is detailed and slow and occasionally frustrating, and I find it genuinely absorbing in a way that I did not fully anticipate when I signed up for it.

Outside the lab and the classroom, I mentor first-year engineering students through the university's peer support programme. I remember being a first-year student who was quietly unsure whether I belonged in the programme — not because anyone told me I did not, but because the gap between what I knew and what was expected felt very wide at the time. I try to be the person for incoming students that I would have found useful then: someone who tells them the truth about what the work is like, and is honest about the fact that finding it difficult does not mean finding it impossible.

I will graduate next year. I do not have everything figured out yet. But I know what I am good at, I know what I am still learning, and I know that the garage in San Antonio is where both of those things started.

