

Mechanical Engineering Through My Eyes

I work, I work getting my hands dirty designing machines. Machines for the human beings out there, for my peers, for my world, for the people who don't believe in me. Why don't they believe in me? They don't believe in me because... I'm a female Mechanical Engineer. So here I am working in an office – most men may I add – and of course my work doesn't get appreciated. Always by the outsiders looking in they thank the Mechanical men, but never us. Never us women. Even if their machines at home are made by us. We don't get appreciated. So this is my story. My sad story. About being a Mechanical Engineer Through My Eyes.

All I remember I started with a positive mindset, going for my interview, thinking I was changing history by being a Mechanical Engineer. Everyone else has told me "There may be better options of you out there" or that "it's just not the right job!" But still I held my head high and went for it. I remember seeing all those men in the office well walking to my interview room. Laughing in joy, with donuts in their hands. All I thought of was that this place seemed to be cheerful... I didn't even try to question where the women were? The interview went quite swiftly and I just knew, I knew I had it in the bag. And that was it. I got the job! But little did I know there was a negative side coming.

The bad started in my fourth month, something was up. My pay was different. I thought perhaps it was an error in the system, but it wasn't. I even checked with my manager, he told me – face-to-face – that my pay was "too high." "Too high for a woman." It all makes sense now I'm not a man am I so why would I get paid higher. Each month it was less and less and less. At this point I may just work for free. I don't even get the amount I promised so why try, why try if my words don't get heard. I don't get heard, no one talks to me, and I'm not even in the work group pictures. They were right. My friends, my family. But I did not listen. By not listening I am now working at an office as a female Mechanical engineer who doesn't get paid as they should.

So there it is my sad but truthful story that isn't right and needs to change.

Mechanical Engineering Through My Eyes

At five I wanted to be a doctor, save lives, experience the joy of life and grief of death. I was told to stop daydreaming. I was told to pick something 'realistic.'

At ten I wanted to be an astronaut, fly from the Earth and live among the stars. I was told to leave the hard things to 'other' people.

At fifteen years of age I decided I would be an engineer. My friends look at me with wide eyes, glancing at each other hiding their mouths. Is it admiration? Are they confused? My parents looked with a masked emotion. 'Concern' they claimed. I felt different, but how so? I didn't know then but I do now.

"We'll see how it turns out." "Are you sure?": All words of doubt stamping out a dream, a decision, *my* decision. My mothers eyes shone with a hidden emotion, she caressed my face, her fingers making patterns on my skin.

"There will be many challenges on the way to success" she states quietly, back then I didn't understand, but I chose to ignore her. Now I wonder if mother always truly knows best.

I didn't understand why my brother didn't get suffocated with questions, when he claimed he wanted to be a millionaire with not a penny in his bank. Not a word uttered when he changed his mind again and again stating he wanted to be a doctor, a firefighter, even a businessman. But me, wanting to be an engineer, no way could they let me be me.

I now sit in class tapping my pen on a graffiti stained table. Looking around past the blur of equations and sketches on the board. I realise these people yearning to be future mechanics are right here with me, but why is there not a single girl in sight. I think back to my friends, the little differences between us, we could all have easily gone into mechanics, but why just me. I brush my hair out of my eyes and glance down at my paper, blank with balls of crumpled designs littered around it. My previous designs had been destroyed, my models crushed, knocked down. My professor claimed they were not worthy of his time. This one will be.

The bell rings, I grab my things and stuff them in my bag leaving the class glancing at the board. Our next project was written in bold: 'Design something life changing.' Life Changing? I am determined to prove I deserve to be here, not to my parents, not to my teacher, but to myself.

I work day and night, during sunshine and rain. I toss multiple ideas replicating the balls of paper left in the classroom. I battle statistics, swirling around my head, pressuring me: 'Most women quit before they finish the module,' 'Women make up only 13% of the engineering workforce,' 'What have women done for the world?' My project is on cars, more specifically seatbelts. Why? Because they are designed for men.

News from numerous car crashes always seem to have reports on female passengers being more injured: necks slit, more injuries to spine and hips just because of our

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different physique. I grew up thinking I was the odd one out, everyday objects not being suited for me: safety goggles didn't fit my face, CPR mannequins didn't look like my body: I learned to save a man but what about a woman? My anger only increased when I found that we, I am 73% more likely to die in a car crash than a man. Test dummies, being the same figure as a man, come out of crashes with minimal injuries: therefore the car is approved, sold, called safe. I don't feel safe and I decided to act on it.

That's how my project idea sparked. I decided that something life-changing wouldn't be new but an invention from 1885, this time suited for women. I place my design into the hands of my professor and I walk to my graffiti stained table and wait. Who will be put forward, who will change lives? I think about those out there suffering from the simple design, that of an object we use everyday of our lives. My name is called, heads turn: some with annoyed expressions, some painted with curiosity at what could have possibly beaten them.

What beat them is the continued determination of a girl that decided what she was going to be at the age of fifteen. A now qualified mechanical engineer.

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When I was a Fairy

My strongest memory from being small
Is a little bit whimsical and certainly airy
But according to all I used to recall
All the times “When I was a Fairy”.

They were dreams I believed in
To treasure and hold
The wings on my back
Were turquoise and gold.

Now that I'm older
I've decided to apply
The rules of physics
To make me fly.

The first step in my engineering plan
Is to refine a strategy
For making a flying machine
To bend the laws of gravity.

I need materials to reduce drag
So will research aerodynamics
To reach the kind of heights
Where the views will be panoramic.

Thanks to the power of memory cloth
The wings are taking shape
With the help of aluminum tubing
And probably a bit of tape.

I've got to consider how to get lift
So must think about weight
A quick study of the force of inertia
To help me go straight.

I probably need a bit of propulsion
So must think about thrust
Acceleration and smooth landing
Is also a must.

It's time to put these wings on my back
And soar across the sky
Thanks to mechanical engineering
I'm finally high and dry.



Ah, mechanical engineering, a world of gears and machines,

Where innovation and precision intertwine like gleaming streams.

From engines to robots, it's a field that never sleeps,
Creating marvels that make our lives run smooth and deep.

With calculations and designs, we bring ideas to life,
Crafting mechanisms that conquer any strife.
From bridges that stand tall to cars that race,
Mechanical engineering leaves its mark in every space.

We analyze forces, dynamics, and thermodynamics too,
Solving problems with creativity and ingenuity, it's what we do.
From the tiniest components to the grandest structures,
Mechanical engineering fuels progress, ensuring a future that's secure.

So let's raise a toast to the mechanical engineers,
The architects of innovation, conquerors of fears.
With their knowledge and skills, they shape the world anew,
Making dreams a reality, with each invention they pursue.

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