Traits of Excellent Engineers Cheat Sheet

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Introduction

Great engineers are competent, creative, yet logically practical, and incredibly influential on everyone's daily lives. And yet, for some, the thought of being an engineer seems like an unattainable and distant goal that can never be achieved. The truth is that anyone can be an engineer, but great engineers are a rare breed. These six inherent traits are the ones that make some engineers rise above the rest.

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1. They're naturally curious

Engineers must be able to observe a process, structure, machine, or system and determine how it works and how they can improve upon it. Curiosity is a beneficial quality in nearly every industry because it indicates interest and drives creativity. Engineers must have the energy and determination to research and understand problems and their solutions and it starts with that natural curiosity. Kids who grew up asking, "Why?" are good candidates for engineering programs - but those who excel at engineering are more often those who pursue "Why?" to "Oh, that's why." Asking questions isn't enough for an engineer; they want to find out the answer and are willing to spend as much as time it takes until they reach a satisfying conclusion..

2. They are self-organized

Engineering teams usually have managers tasked with keeping workers on course, but most engineers still must be able to manage their own projects to some degree. Often, engineering projects last months or years, and ideas or discoveries made long ago must be readily available for application. Even better, by displaying project management skills, you are more likely to obtain raises and promotions. Fortunately, self-organization is one of the few top engineering qualities that can be improved upon with concerted effort.

3. They are detail-oriented

To succeed in engineering, the person needs to be able to parse details and organize them to create an effective machine—process, system, structure. This is part of an engineer's daily responsibilities and such attention to detail allows engineers to analyze intricate problems and produce high-quality work.

Engineering

4. Good analytical skills

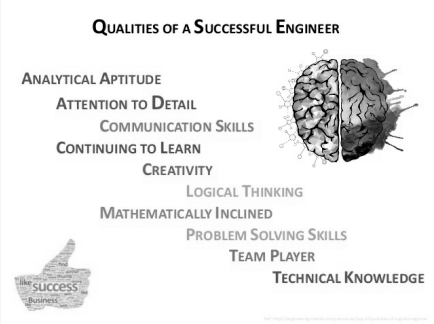
There is a world of difference between something working and something working well. Engineers are typically tasked with finding the most efficient solution to a problem, which requires being able to analyze the issue as well as all possible answers to identify the best course of action. Analytical ability comes in many shapes and forms; even english majors must be analytical in some sense. However, engineers' analytical minds are constantly running, revising plans to ensure the best possible outcomes. People who are able to logically pick problems apart and discover optimal solutions on the fly have the right stuff as a potential engineer..

5. Strong mathematical skills

In every engineering discipline, from computer engineering to petroleum engineering, you will work with numbers and equations. At its very core, engineering is the application of theoretical mathematics to the physical world to solve everyday problems. Engineering programs are often rigorous in mathematical studies, putting students through advanced calculus, statistics, trigonometry, and geometry. Students curious about engineering should be confident and comfortable in writing and using formulas to solve problems because it will be required after graduation..

6. Good communication skills

While engineers may seem to be asocial, numbers-focused professionals, they are far from hermits. Engineers almost always work in teams, which means communication between team members occurs on a regular basis. Communication failures within engineering result in low-quality machines, inefficient systems, and worse. So the ability to express thoughts and opinions must be finely honed.
As with project management skills, engineers who prove themselves adept at communication often excel in management positions. Thus, if you believe your ability to communicate is above and beyond the average engineer's, you should consider advanced education to prepare you for your accelerated career in engineering



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