



Immorse

experience your path

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MECHANICAL ENGINEERING

THE IMMRSE EXPERIENCE



Congratulations on completing Virtual Internship Program™ (VIP). Your Career Immorse Report is now ready to give you a clear understanding of your compatibility with your custom filtered, shortlisted and chosen career options.

This highly reliable and accurate report about your potential competence in your chosen professions is scientifically designed by integrating advanced technology and in-depth research data related to career assessment.

Developed by our team of highly experienced psychologists, psychometrics, researchers and leading industry professionals in India, your Career Immorse Experience is the most unique and all-encompassing process of arriving at a clear-cut, sharply defined career choice decision. It is the only career guidance program in the country which identifies and acknowledges that experience is the greatest teacher across all professions.

Through our Virtual Internship Program™ (VIP), you engaged in an immersive, hands-on experience of practical, on-the-job realities of your chosen career options. In this simulated internship experience, you were oriented & guided by top industry professionals and leaders. Such experience is vital towards making a precise career path decision with absolute confidence, conviction and clarity of mind.

Your Career Immrse Report is computed on the basis of your on-the-job performance at the time of the VIP™. This report is a deeply insightful tool which highlights your professional compatibility and competence in your chosen career options. We encourage you to carefully reflect upon this report to develop a thoroughly informed, scientifically accurate as well as deeply passionate career choice.



YOUR CHOSEN CAREER OPTION

MECHANICAL ENGINEERING

Mechanical engineering, one of the oldest & broadest disciplines of engineering, applies principles of physics and material science for analysis, design, manufacturing and maintenance of mechanical systems. Mechanical engineers are the people who design, create and maintain all kinds of factories, industrial setups and machines. The goal of mechanical engineering as a field is to provide diverse products to mankind, which make life more comfortable for all human beings. All other branches of engineering have evolved from mechanical engineering, and they all support the development of mechanical gadgets being produced to for the end use of a consumer.

The study of science is basically the study of observing and understanding the universe. Mechanical engineering is focused on the study of inanimate, tangible objects in the universe. The curriculum primarily involves physics, math, and calculus. It also involves a broader study of various scientific and engineering subjects such as electronics, computer science, and chemistry. Mechanical engineers are basically trained to become expert designers, manufacturers and quality controllers of machines.

The field of mechanical engineering is not a destination, but a route to understand and apply universal laws. It is best suited for those with inquisitiveness and ingenious nature. It needs a passion for science & technology.

INDUSTRY SCOPE

For students who have a deep interest in this field, the following statistics show that India has a really bright picture with humongous development possibilities in the field of Mechanical engineering:

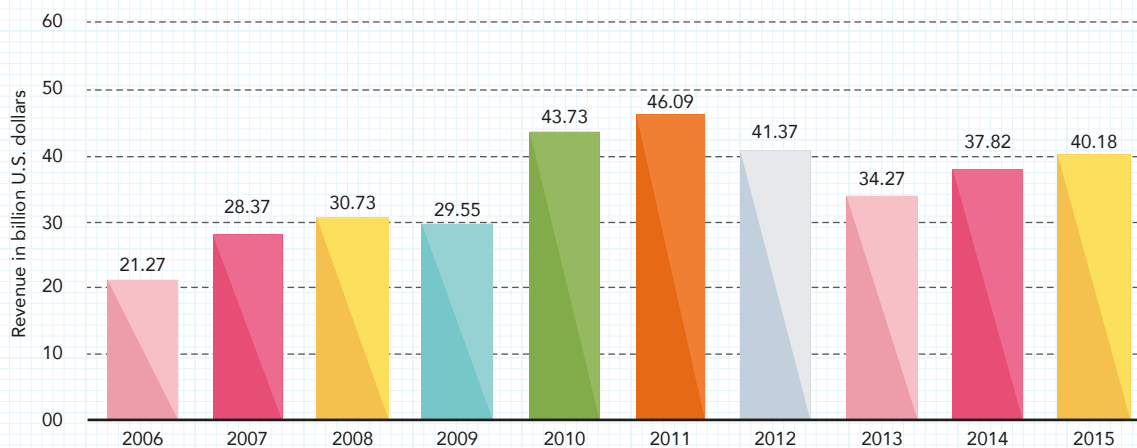
- In 2015, the revenue from Mechanical Engineering industry in India was sized

at about 40 billion USD.

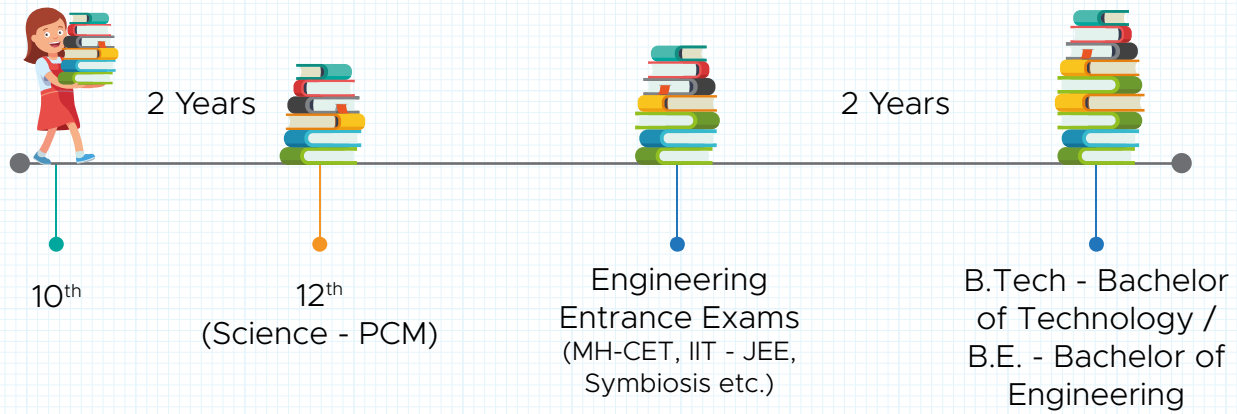
- The capital turnover in India from the engineering sector is estimated at US\$ 70 billion in 2017 and is expected to grow to US\$ 115.17 billion by 2025.
- India's engineering R&D market will increase from US\$ 28 billion in FY18 to US\$ 45 billion by 2020.
- In the Union Budget 2018-19, the government allocated US\$ 92.22 billion for the infrastructure sector. Allocation to the defence sector was raised to US\$ 45.57 billion under Union Budget 2018-19.

As for future avenues, mechanical engineering students who can learn to create virtual simulations before proceeding to the design, build, and test stages might find themselves in high demand by companies because these skills will allow firms to reduce product development cycles. Engineers who have experience or training in three-dimensional printing also will have better job prospects.

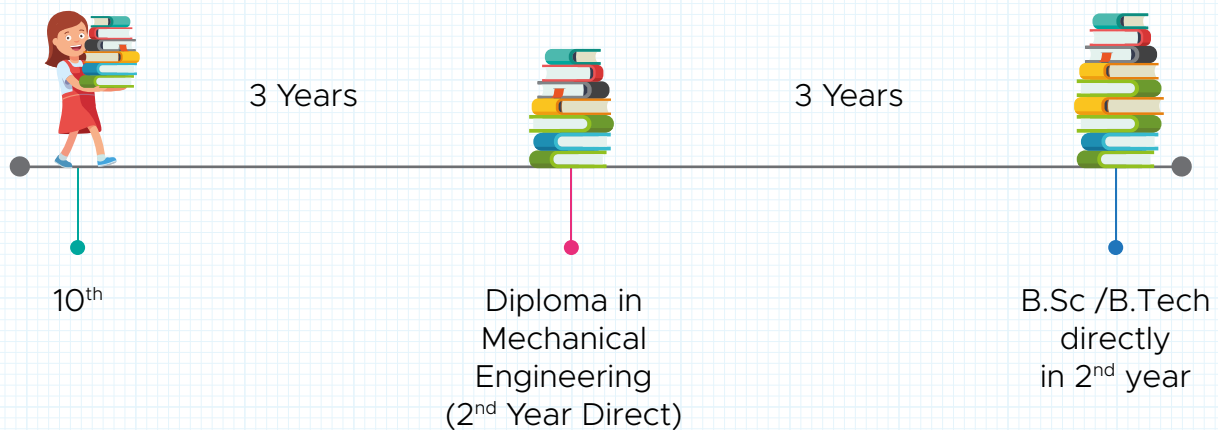
Revenue of the mechanical engineering industry in India from 2006-2015
(in billion U.S. dollars)



EDUCATIONAL PATH



OR



PLACEMENT

Mechanical Engineers can find professional placements across several sectors, some of which include:

- Automotive
- Manufacturing
- Power
- Aircraft
- Marine transport
- Robotics
- Medical Devices
- Construction & Building
- Industrial Equipment & Machinery
- Railway
- Heating & Cooling Systems
- Defense
- Aerospace

WORK PROFILE

A mechanical engineer may find the following jobs in the following departments in the industry:

- Design
- Production
- Maintenance Engineering
- Sales
- Manufacturing
- Quality Control & Management Systems
- Purchase
- Marketing

**There are various departments and job profiles for professional mechanical engineers at different stages of their careers. The above list is not an exhaustive list of such profiles, but a reference shortlist of common job profiles.*

ENTRY-LEVEL SALARY

Salaries are subjective to a wide range of factors such as:

- Candidate's competence & financial needs
- Job responsibilities
- Size of the employing corporation
- Fresher employment policies
- Location - city/country
- Current economic conditions

As of today's overall scenario in India, an approximate entry level salary can be rounded to about Rs. 3-4 lakhs per annum. However, depending on the above listed and other factors, each candidate's entry level salary may vary significantly.

CAREER IMMRSE REPORT

Every profession demands a unique mix of intrinsic or developed qualities in an individual. Individual qualities are divided into two categories: Left Brain Qualities and Right Brain Qualities. Brain mapping studies by scientists categorize the functions of the human brain into these two halves or hemispheres. The left brain carries out analytical and methodical functions of thinking while the right brain processes creative, innovative and artistic functions. Each individual has a unique natural mix of left brain and right brain qualities. Certain qualities can be developed further through focused training.

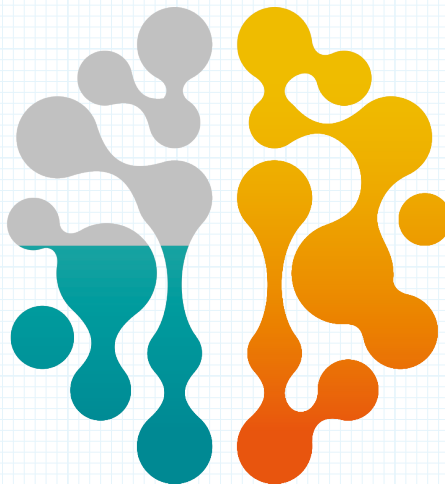
The following is an assessment of your estimated compatibility in relation with the Balanced Compatibility Requirement for the field of Mechanical Engineering. This assessment is derived from computing the student's performance in the Virtual Internship Program.:

LEFT BRAIN

50%

Qualities for Mech Eng

- Analytical Skills
- Detail Orientation
- Mathematical Skills
- Problem Responsivity



RIGHT BRAIN

100%

Qualities for Mech Eng

- Visuospatial Skills

Your left brain quality is relatively convincing. However, there is need & scope for further improvement.

Your right brain quality is impressive! Capitalize on your strength.

** Please keep in mind that the above report is not a static and/or constant evaluation of your brain qualities. Every person has a unique mix of strong and weak qualities, which are constantly evolving. By applying strategic training methods, your mind can be trained to improve its functioning in a specific quality.*

PROFESSION COMPATIBILITY ANALYSIS

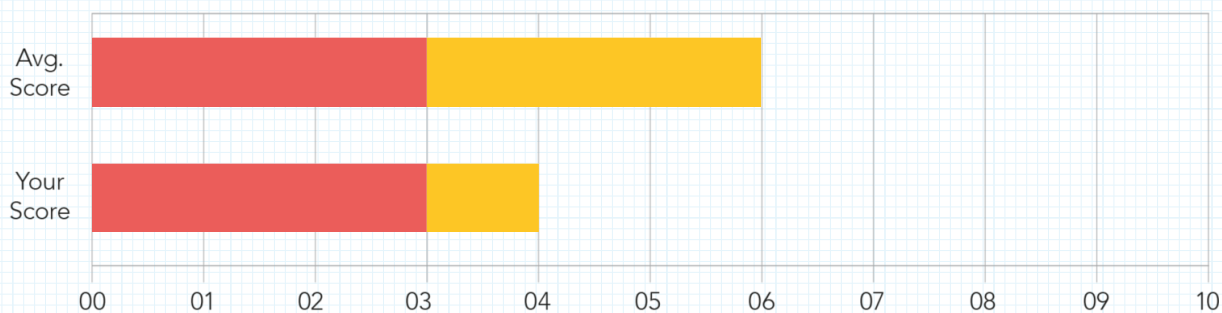
1. ANALYTICAL SKILLS

Analytical Skills is the process of using a rational, systematic series of steps based on sound mathematical procedures and given statements to arrive at a conclusion. For example, you use your brain's Analytical Skills function when you work on geometric proofs, or when you solve a rubik's cube.

The job of mechanical engineers is to apply core principles of physics for design, production and operations of machines & tools. Such a job naturally demands a good performance in analytical skills.

PERFORMANCE REPORT:

Based on the computing of your performance in the Virtual Internship Program, the following is an assessment of your strength in Analytical Skills:



Above graph shows Analytical Skills Performance graph

HOW TO STRENGTHEN YOUR BRAIN'S ANALYTICAL SKILLS

- Analytical Skills is a vast subject. Read about the topic. Begin with reading internet articles and progress to reading a couple of books.
- Take a course. You may join classes or sign up for an online course. Finding relevant apps may also be useful.

- There are several online practice tests for Analytical Skills. Take these tests and try to gradually improve your performance.
- Solve logic puzzles in the newspaper. Playing games like chess and rubik's cube will also help enhance Analytical Skills.
- Physical exercises, meditation and mindfulness practices boost the overall performance of the brain and will help strengthen your Analytical Skills. Strive to incorporate these activities into your day-to-day routine.

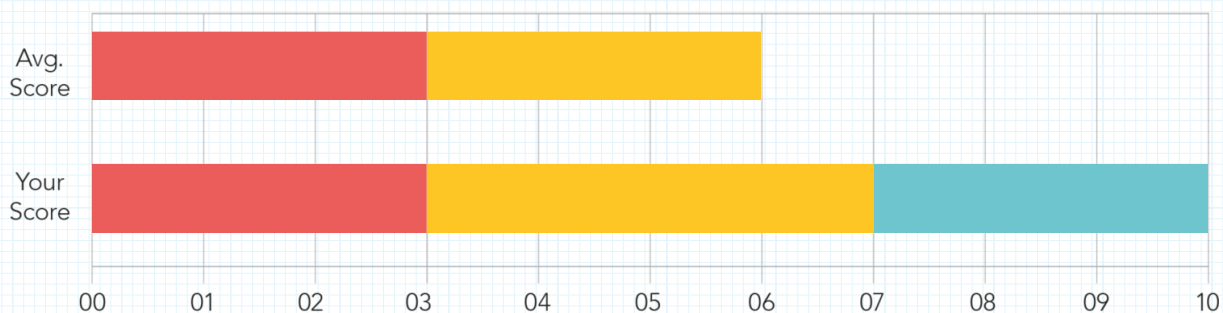
2. DETAIL ORIENTATION

The quality of detail orientation is the trait which defines a very close attention to the several small parts and systems that constitute the bigger picture. It refers to the mechanical engineer's ability to arrange things or actions in precise orders or patterns.

Tasks such as designing the intricacies of a single machine or creating an entire industrial setup for a factory require mechanical engineers to exhibit meticulous detail orientation. Such operations require attention to details with absolute precision, because the functionality of the manufacturing setup may collapse entirely by a single minute error.

PERFORMANCE REPORT:

Based on the computing of your performance in the Virtual Internship Program, the following is an assessment of your strength in Detail Orientation:



Above graph shows Detail Orientation Performance graph

HOW TO STRENGTHEN YOUR BRAIN'S DETAIL ORIENTATION

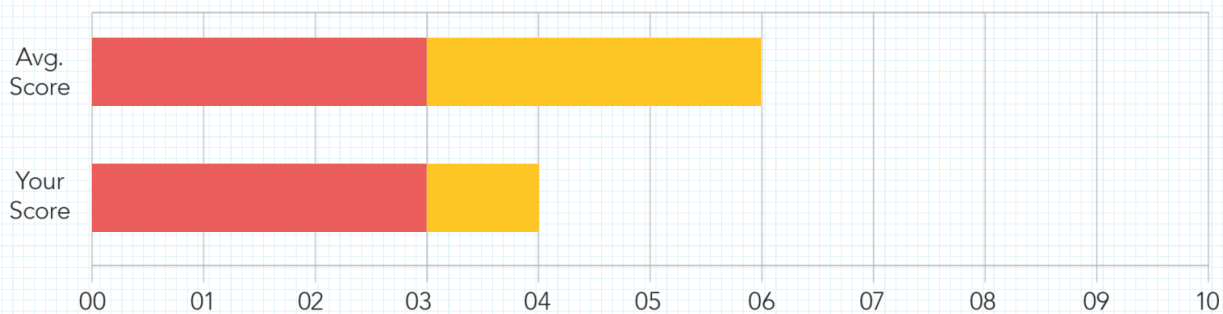
- Practice making simple machines at home such as a handheld fan, fan powered electric bulb, etc.
- Developing an advanced level proficiency in MS Excel is highly recommended.
- Develop organization habits in your daily lifestyle - organize your room, books, wardrobe, kitchen, etc. Create a methodical system of organization. For example, organize your books by categories, and in alphabetical order.

3. MATHEMATICAL SKILLS

Mathematical skills is linked with a person's ability to choose the right mathematical methods or formulas to solve a problem. Mechanical engineering as a subject is based on the laws of physics. The curriculum involves a good amount of calculus and students must be able to feel at ease with complex mathematical formulae.

PERFORMANCE REPORT:

Based on the computing of your performance in the Virtual Internship Program, the following is an assessment of your strength in Mathematical Skills:



Above graph shows Mathematical Skills Performance graph

HOW TO STRENGTHEN YOUR BRAIN'S MATHEMATICAL SKILLS

- Take online math tests regularly for practice
- Practice problems with algebraic formulae and geometric theorems. Don't just learn the formulae and theorems, but research about them and find out where in actual life can you apply these. For example, read about who Pythagoras was, how he developed the theorem and where is pythagoras theorem applied in real life.
- Take classes or online tutorials for speedy mental math.
- Make mental math a part of your daily practice. For example, if you see "33% discount" offered on some product at the mall, make it a point to calculate the price mentally.
- Play math games online and number based games.
- Download relevant apps and use them frequently.

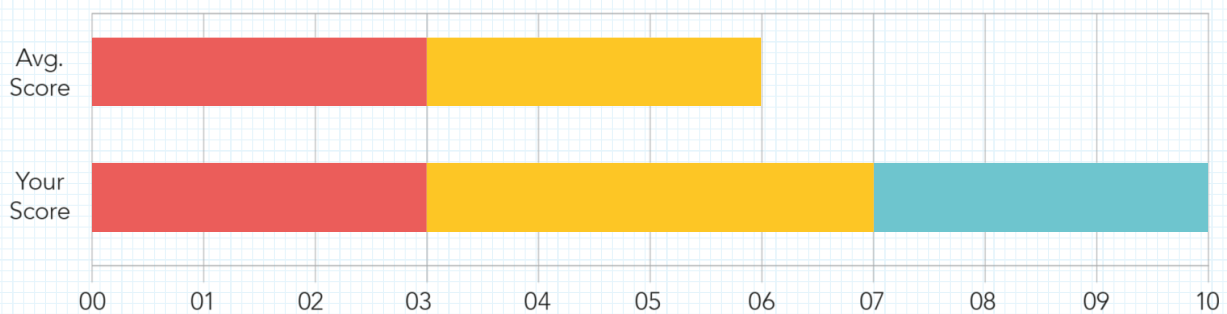
4. PROBLEM RESPONSIVITY

Problem responsivity is strong in an individual who has strong attentiveness, memory and analytical qualities. It refers to a professional's ability to tell when something is wrong or the ability to predict that something is likely to go wrong.

Mechanical engineers must be able to identify a minute error causing faults in the functionality of a large mechanical system such as an industrial factory. They must also be able to foresee if any component of a machine will go wrong in the future.

PERFORMANCE REPORT:

Based on the computing of your performance in the Virtual Internship Program, the following is an assessment of your strength in Problem Responsivity is:



Above graph shows Problem Responsivity Performance graph

HOW TO STRENGTHEN YOUR BRAIN'S PROBLEM RESPONSIVITY

- Spend time at local repair shops where household appliances are repaired. Or maybe at a car garage. See if you can learn about common issues and how to fix them. Research about these problems and understand the scientific principles functioning behind these real-life examples.
- Develop self-critique habits. Write a journal to jot down the problems in your life. Make a thorough list of the problem people, the external factors as well as the internal factors - your own ways of thinking, your habits and your own choices which create unpleasantness in your life.

- Visit spaces such as Maker's Asylum Mumbai and The Studio Wams in Ghatkopar east and engage in their technologically creative activities. Such activities help you make errors and you develop an ability to inspect what went wrong.
- In situations when you have to solve the problems you identified, keep in mind the saying, "to make a simple solution is the most complicated thing in this world." The best thoughts regarding such simple solutions come to you when your mind is very relaxed. Read about slow breathing techniques and mindfulness practices which can help keep your mind relaxed in all situations.

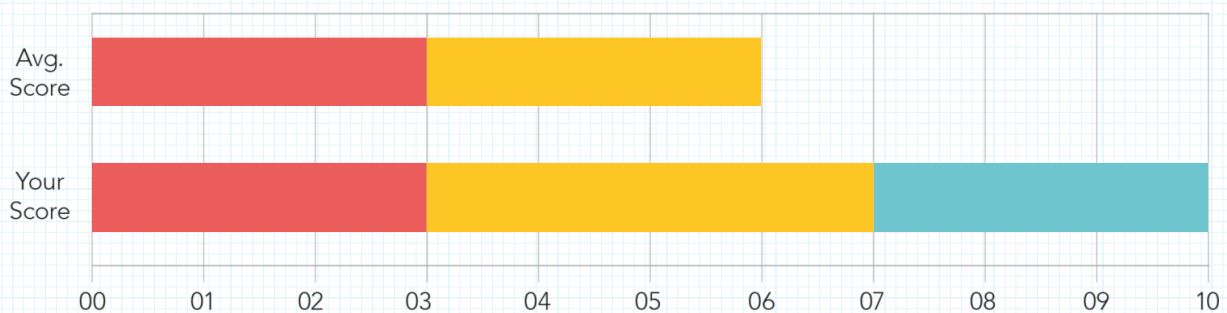
5. VISUOSPATIAL SKILLS

Mechanical engineers have strong visuospatial skills i.e. they are able to mentally visualize how an object or structure will appear when it is rotated or shifted, or when its parts are moved or rearranged.

This mental quality enables mechanical engineers to imagine a machine and all its components as well as moving parts with vivid clarity in their minds. They work further upon these visualizations by applying theoretical knowledge of universal laws into practical applications of creating machines and systems.

PERFORMANCE REPORT:

Based on the computing of your performance in the Virtual Internship Program, the following is an assessment of your strength in Visuospatial Skills:

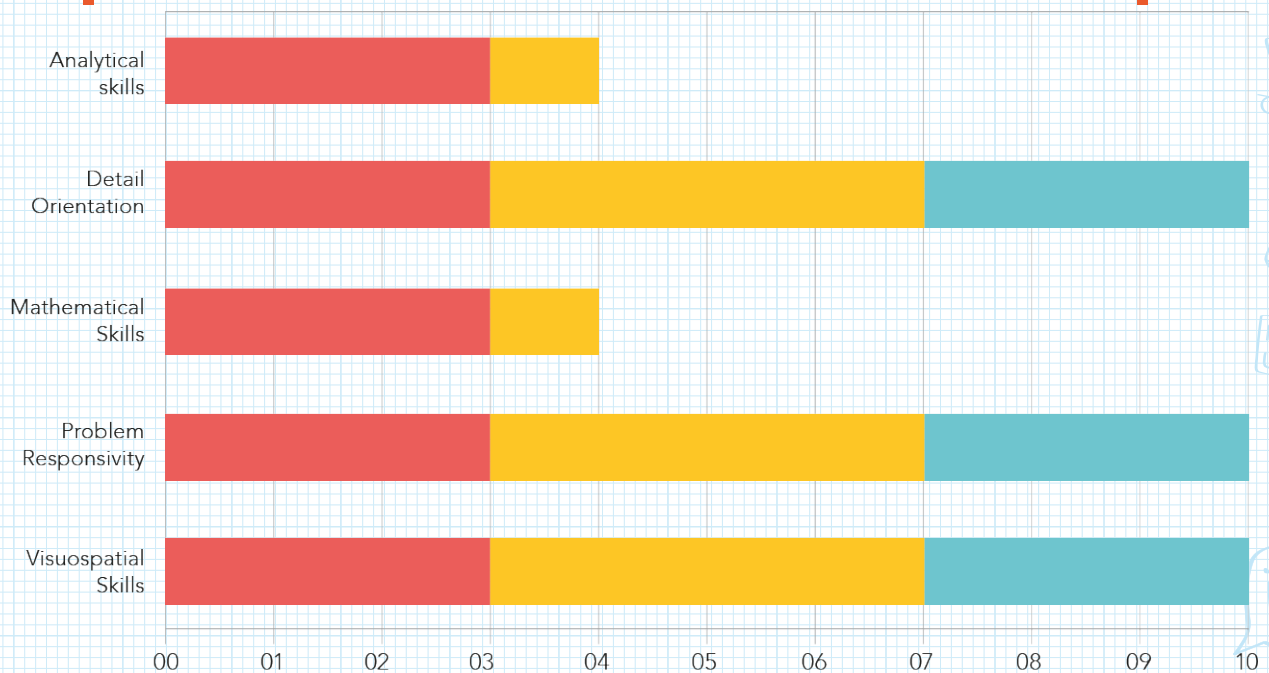


Above graph shows Visuospatial Skills Performance graph

HOW TO STRENGTHEN YOUR BRAIN'S VISUOSPATIAL SKILLS

- Practice origami and papercraft as regular hobbies.
- Draw structures and objects not by observing them in reality, but from your imagination.
- Play architecture-themed video games such as SimCity and Cities:Skyline.

PROFESSIONAL COMPETENCE ANALYSIS



1-3 : BELOW AVERAGE, 4-7 : AVERAGE, 8-10 : ABOVE AVERAGE.

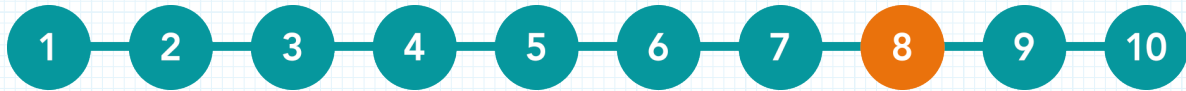
The above Professional Competence Analysis is a scientifically computed measure of your brain's Analytical Skills, Detail Orientation, Mathematical Skills, Problem Responsivity and Visuospatial Skills.

Based on your Profession Compatibility and Professional Competence Analysis, your Career Immorse Grade in the profession of Mechanical Engineering is:

HYPER IMMRSIVE

Your competence in the field of Mechanical Engineering is impressive! We encourage you to consider pursuing Mechanical Engineering for your career. Your intrinsic strengths align significantly with this profession and you should focus on nourishing your skills, qualities and talents further. However, if you are unsure of your interest in this field, please do not rush into a decision. Take time for further research. Keep in mind that there are several other career options to choose from, and multiple professional options always align with every individual's competence.

INTEREST LEVEL



At Immorse, we emphasize on the importance of being deeply interested in the career path you choose for yourself. Studies have proven that being interested in a topic is a mental resource that enhances learning, which then leads to better performance and achievement.

Based on your responses regarding the various tasks you performed in the VIP™, your Interest Level in the field of Mechanical Engineering is 8. This Interest Level is rated on a scale of 1 to 10, with 10 being the highest.