**Week 8**

**Name:**

**Mobile:**

| **Personal Development Workouts** |
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| 1. Watch the movie “Shawshank Redemption” 2. Finish the book “Discipline Equals Freedom” by Jocko Willink |
| *Write a short description about this task*  *The Shawshank Redemption is a 1994 American drama film written and directed by Frank Darabont, based on the 1982 Stephen King novella Rita Hayworth and Shawshank Redemption. The film tells the story of banker Andy Dufresne (Tim Robbins), who is sentenced to life in Shawshank State Penitentiary for the murders of his wife and her lover, despite his claims of innocence. Over the following two decades, he befriends a fellow prisoner, contraband smuggler Ellis "Red" Redding (Morgan Freeman), and becomes instrumental in a money laundering operation led by the prison warden Samuel Norton (Bob Gunton). William Sadler, Clancy Brown, Gil Bellows, and James Whitmore appear in supporting roles.*  *Link to the folder containing your audio summary*  [*https://drive.google.com/file/d/1Zc1u0mbXJeEUi9OvkUnB2o66r9kVOZJq/view?usp=drive\_link*](https://drive.google.com/file/d/1Zc1u0mbXJeEUi9OvkUnB2o66r9kVOZJq/view?usp=drive_link) |
| *Write a short description about this task*  *Jocko Willink's methods for success were born in the SEAL Teams, where he spent most of his adult life, enlisting after high school and rising through the ranks to become the commander of the most highly decorated special operations unit of the war in Iraq. In Discipline Equals Freedom, the #1 New York Times bestselling coauthor of Extreme Ownership describes how he lives that mantra: the mental and physical disciplines he imposes on himself in order to achieve freedom in all aspects of life.*  *Link to the folder containing your audio summary of each chapter*[*https://drive.google.com/file/d/1IremnJi6KYsZFK-6B7s4vV\_e1\_3le2Yz/view?usp=drive\_link*](https://drive.google.com/file/d/1IremnJi6KYsZFK-6B7s4vV_e1_3le2Yz/view?usp=drive_link) |

| **Technical Workouts** |
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| 1. Linear Algebra :    1. Linear Equations    2. Matrices - Basics, Types, Transformations    3. Addition, Subtraction, Multiplication    4. Eigenvalues and Eigenvectors    5. Vectors 2. Vector Calculus :    1. Univariate, Bivariate, Multivariate    2. Learn about Gradients 3. Statistics & Probability Concepts :    1. Descriptive Statistics    2. Variability    3. Correlation    4. Covariance    5. Regression    6. Bias / variance tradeoff    7. Hypothesis testing    8. Probability - Basics    9. Discrete and Continuous Variables    10. Probability Distribution and Types    11. Central Limit Theorem    12. Sampling, Random variables    13. Range and Interquartile Range    14. Skewness 4. Create python scripts for the above concepts.   Note: Please don’t stick only to the concepts given above, you have to read more than that. |
| *Write a short description about this task*  *Algebra is a fundamental branch of mathematics that deals with using letters, symbols, and numbers to represent and solve equations and mathematical relationships. It is a powerful tool for problem-solving and understanding the patterns and rules that govern mathematical operations.* |
| *Write a short description about this task*  *Calculus is a powerful branch of mathematics that focuses on understanding change and motion. It deals with the study of rates of change and the accumulation of quantities. This field of mathematics has two primary branches: differential calculus and integral calculus.* |
| *Write a short description about this task*  *Statistics is a crucial field of mathematics and data analysis that deals with collecting, organizing, analyzing, interpreting, and presenting data. Its primary goal is to extract meaningful insights and patterns from data to make informed decisions and draw conclusions about a population or a phenomenon.*  *Probability is a fundamental concept in mathematics and statistics that quantifies the likelihood of an event occurring. It is a way of measuring uncertainty and making predictions based on available information and past observations.* |
| *Link your script*  [*https://drive.google.com/file/d/1bOnhyLuG5H29rL-t6s0f7AonsldWkLdP/view?usp=drive\_link*](https://drive.google.com/file/d/1bOnhyLuG5H29rL-t6s0f7AonsldWkLdP/view?usp=drive_link)  [*https://drive.google.com/file/d/1MkFWTK1SwUQwvhJyM0vLXpi14okpsjk1/view?usp=drive\_link*](https://drive.google.com/file/d/1MkFWTK1SwUQwvhJyM0vLXpi14okpsjk1/view?usp=drive_link)  [*https://drive.google.com/file/d/1CleKRtqnxkjhZj2oRosuO9J\_SOdSIy6Y/view?usp=drive\_link*](https://drive.google.com/file/d/1CleKRtqnxkjhZj2oRosuO9J_SOdSIy6Y/view?usp=drive_link)  [*https://drive.google.com/file/d/1ofdfY59\_yrzfPPuwOPmbj7DPNuuihdEj/view?usp=drive\_link*](https://drive.google.com/file/d/1ofdfY59_yrzfPPuwOPmbj7DPNuuihdEj/view?usp=drive_link) |

| **Miscellaneous Workouts** |
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| 1. Practice typing for at least one hour each day. Finish as many chapters as possible as you can. Don’t spend more than an hour each day. 2. Prepare a topic for the tech seminar. Record and upload it on youtube as an unlisted video. 3. Conduct a Feedback session by the end of this week. 4. Prepare your progress video for the last week. Record and upload it on youtube as an unlisted video. |
| *Write a short description about this task*  *"Improve your typing skills with our engaging and interactive typing practice program! Whether you're a beginner looking to learn touch typing or an experienced typist aiming to boost your speed and accuracy, our platform has you covered. With a wide range of fun exercises and challenging lessons, you'll master the keyboard in no time. Track your progress, receive personalized feedback, and watch your typing proficiency soar to new heights. Start typing today and unlock the potential to be a faster and more efficient typist*  *Link to screenshot image*  [*https://drive.google.com/file/d/1L5UhSNB4XPpFa2JXsYYWWZ0BWfirpIdX/view?usp=drive\_link*](https://drive.google.com/file/d/1L5UhSNB4XPpFa2JXsYYWWZ0BWfirpIdX/view?usp=drive_link) |
| *Write a short description about this task*  *"The future of technology promises an awe-inspiring era of innovation and transformation. Advancements in artificial intelligence, quantum computing, biotechnology, and more are set to revolutionize how we live, work, and interact with the world. Imagine smart cities optimizing energy usage, self-driving vehicles navigating seamlessly through traffic, and personalized healthcare solutions tailored to individual needs. As technology becomes increasingly interconnected, we can expect a new level of convenience and efficiency in our daily lives. However, with these advancements come important ethical and societal considerations that we must address to ensure a future where technology serves as a force for good. Embracing this future with a balance of innovation, responsibility, and inclusivity holds the potential to shape a brighter, more sustainable, and harmonious world for generations to come*  *Link to your seminar video* |
| *Link to the document containing notes for your feedback session*  [*https://drive.google.com/file/d/1oW5SU9OLSxi4tr\_ML4h8shQ44rCKyo5x/view?usp=drive\_link*](https://drive.google.com/file/d/1oW5SU9OLSxi4tr_ML4h8shQ44rCKyo5x/view?usp=drive_link) |
| *Write a short description about this task*  *Link to your progress video*  [*https://youtu.be/aErGKZjylJc*](https://youtu.be/aErGKZjylJc)  *First, let's delve into Object-Oriented Programming (OOP) concepts. At its core, OOP allows us to organize code into reusable, modular, and scalable components called objects. Among the fundamental pillars of OOP are Constructors and Destructors. Constructors are special methods that initialize objects when they are created, enabling us to set up the initial state of an object. On the other hand, Destructors perform clean-up tasks when an object is no longer in use, ensuring efficient memory management.* |