To preface:

The majority of my sources will be "how-to's" and materials research since I am building something for my capstone project. Learning how to do things is much more crucial than any long PDF or data research can offer.

I'm using this document to help myself since I feel that it matters more.

1. "Simple Servo Upgrade to READ ANGLES!" *YouTube*, YouTube, 14 Apr. 2020, www.youtube.com/watch?v=XfZLtkr6dgU
    - This source provides information about how I will measure the force output of my project, using the rack and pinon mechanism I came up with. This video depicts how to take apart a servo and place a potentiometer within it in order to display a degree value. This will be crucial in correlating a force value with through algorithmic means.
2. "Servo Torque Constant Calculation." *Arduino Forum*, 2 June 2013, forum.arduino.cc/t/servo-torque-constant-calculation/166000?form=MG0AV3. Accessed 19 Jan. 2025.
    - The forum discusses calculating the torque constant (Kt) for a micro servo motor, which is essential for the project. It involves using a servo to measure force by correlating angle degrees with force values. The torque constant helps connect electrical input (current) to mechanical output (torque). Understanding this relationship ensures accurate calibration of the servo's movements and force measurements.
3. "Arduino Course for Beginners - Open-Source Electronics Platform." Www.youtube.com, YouTube, 8 June 2021, www.youtube.com/watch?v=zJ-LqeX_fLU&ab_channel=freeCodeCamp.org. Accessed 19 Jan. 2025.
    - This source will teach me the basics of Arduino code, as well as a simple understanding of the systemic methods used when coding within an IDE. By engaging with this material, I aim to develop a foundational understanding of how to build and program electronic projects. Additionally, I will learn the principles of coding logic and the systematic processes involved in debugging and optimizing code within an IDE. I intend to study and use this within a month. Or so once I delve into the electronics.
4. LeMaster Tech. "How to Connect and Control an Arduino from Python!" YouTube, 30 Nov. 2023, www.youtube.com/watch?v=UeybhVFqoeg. Accessed 18 July 2024.

    - The creator demonstrates how to control an Arduino board using Python programming. The tutorial begins with a brief overview of Arduino and Python, emphasizing the advantages of using Python for more complex projects, which is relevant to mine. You learn how to set up a simple Arduino project that controls two LEDs via serial communication from a Python script. By the end, I learned how to set up both the Arduino sketch and Python code necessary for controlling LED states based on user input, which I can now apply to my own circumstances.
5. NL Tech. “UI/UX Design 👨‍💻 Develop an App from Scratch (Part 2).” YouTube, 11 Feb. 2024, www.youtube.com/watch?v=D_TpsGgVdwY. Accessed 20 Jan. 2025.
    - In order to make a nice display, this is needed. The video highlights their use of Figma to design components, wireframes, and layouts while discussing important design elements such as button styles, color schemes, and usability considerations for both desktop and mobile interfaces. Even though I may not get to making a fancy arcade application, it’s something that I would love to do, hence the source being here.
6. “Khan Academy.” Khanacademy.org, Khan Academy, 2020, www.khanacademy.org/science/ap-college-physics-1/xf557a762645cccc5:force-and-translational-dynamics/xf557a762645cccc5:spring-force/a/what-is-hookes-law. Accessed 19 Jan. 2025.
    - Understanding Hooke's Law is crucial for building a spring-dowel mechanism because it helps to determine the necessary spring constant and predict how the spring will respond to different forces, intertwining with the rack and pinon mechanism that I will be creating. This knowledge allows you to design a mechanism that can reliably store and release energy, ensuring the desired motion and functionality.
7. PowerBorn Productions. “How I Built “the CRAZIEST” Gym EVER" Series: Armwrestling Machine.” YouTube, 23 Apr. 2020, www.youtube.com/watch?v=6NuccFailIo. Accessed 20 Jan. 2025.
    - This video provides a comprehensive guide that is perfect for someone like me. It focuses on affordability, ease of assembly, and the ability to replicate various arm wrestling techniques such as cupping, rising, and finger pressure. The video meticulously walks viewers through each step of the process, from gathering materials and cutting wood components, to assembling the base and the machine’s moving parts. Key steps are highlighted throughout the build, ensuring clarity and ease of understanding.
8. “NeoGeo Development Wiki.” Neogeodev.org, 2022, wiki.neogeodev.org/index.php?title=Main_Page. Accessed 20 Jan. 2025.
    - The Neogeodev wiki offers detailed guides and resources for developing games and applications for the Neo Geo system, which is the main operating system/base system

of any old arcade games. It may help once I get to the optional final part of my capstone: the leaderboard.

9. ---. “How I Built the Craziest Gym Ever Series: Armwrestling Training Table.” YouTube, 28 Mar. 2019, www.youtube.com/watch?v=Qp_y84XZef4. Accessed 20 Jan. 2025.
    - The video provides a step-by-step guide, including lists of materials, tools needed, precise cut measurements, assembly instructions, and estimated costs for constructing the table. Only the table.
10. “Pololu - Maestro USB Servo Controllers.” Pololu.com, Pololu, 2018, www.pololu.com/category/102/maestro-usb-servo-controllers. Accessed 19 Jan. 2025.
    - Using servos in my project will allow for precise control of movement, which is essential for creating realistic arm-wrestling actions. Having a website like Pololu that offers all the necessary hardware, such as Maestro USB Servo Controllers, will be incredibly helpful. It ensures that I have access to high-quality components and can easily find everything I need in one place.