

HEMISTEN



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Overcoming Impostor Syndrome

A Guide for Women in STEM

Course Introduction & Objectives

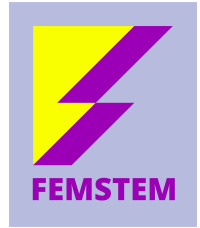
Welcome to **Overcoming Impostor Syndrome!**

Impostor Syndrome is a common challenge, especially for underrepresented groups like women in STEM. In this course we'll recognize our own patterns and understand that impostor feelings are not only normal but can be managed with the right strategies.

Course Objectives:

- A. Identify and understand what Impostor Syndrome is, how it manifests in STEM fields, and why it disproportionately affects women in these areas.
- B. Provide practical strategies for combating Impostor Syndrome, including techniques for challenging negative thoughts, developing a growth mindset, and practicing self-compassion.
- C. Encourage to build and engage with a supportive network of mentors and peers who can offer support, share experiences, and help them navigate the challenges of STEM education with confidence.

What to Expect: We'll gain a deeper understanding of Impostor Syndrome, recognize its impact on our academic and professional lives, and develop practical strategies to build confidence, manage self-doubt, and thrive in STEM field.



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What is Impostor Syndrome?

Definition:

Impostor Syndrome refers to the feeling of **being a fraud**, where individuals doubt their accomplishments and fear being exposed as incapable, despite evidence of their competence.

Key Points:

- ❖ Affects high-achieving individuals, particularly women and marginalized groups in male-dominated fields like STEM.
- ❖ It often involves attributing success to luck rather than ability.
- ❖ Leads to anxiety, self-doubt, and the fear of being "found out."
- ❖ It's common (more than we think).
- ❖ It's something that can be overcome with the right strategies.



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Impostor Syndrome in STEM Fields

Why it's more prevalent:

- ❖ Gender imbalances, leading to isolation or feelings of not fitting in.
- ❖ Stereotypes about "who belongs" in STEM
- ❖ The competitive, high-performance culture can amplify self-doubt.
- ❖ The stereotype of "genius" and "talent" being innate, rather than developed.
- ❖ Lack of representation and mentorship for women in STEM.
- ❖ Women often face additional pressures, such as proving competence in male-dominated fields).



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Statistics:

- 57% of female graduate students in STEM fields report feeling like impostors, with significant anxiety and self-doubt affecting their academic performance.
- 70% of women in STEM report experiencing Imposter Syndrome at some point in their academic or professional careers, particularly in male-dominated fields like engineering and computer science.



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Common Feelings of Impostor Syndrome

Signs to look out for:

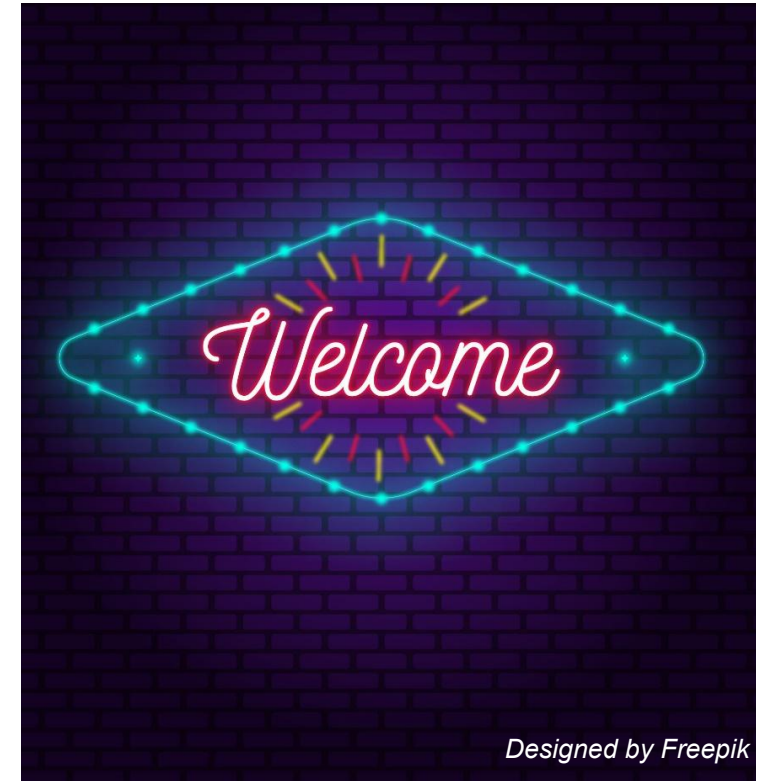
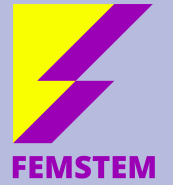
- ❖ Feeling like you don't deserve your achievements or they are due to luck, timing, or external factors rather than your own abilities.
- ❖ Doubting your skills or intelligence.
- ❖ Fear of being "exposed" as inadequate.
- ❖ Feeling that it's only a matter of time before someone finds out you're not really capable.
- ❖ Overworking to compensate for feelings of inadequacy.
- ❖ Recurring thoughts of failures in your work.
- ❖ Difficulty accepting compliments.
- ❖ Setting unrealistically high standards.



Have you ever detected in yourself these symptoms?
In which situations?



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**Welcome to the Impostor
Syndrome club!**

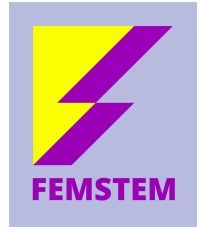
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The 5 Types of Impostors (by Dr. Valerie Young)

1. **The Perfectionist** – Sets incredibly high standards and feels like a failure if they don't meet them, no matter how small the imperfection.
2. **The Expert** – Feels like they must know everything and often feel inadequate if they don't know all the answers. They fear being "found out" for lacking knowledge
3. **The Natural Genius** – Believes success should come easily, and if something requires effort, it feels like a failure. They tie their self-worth to things coming easily.
4. **The Soloist** – Feels like they must do everything on their own, and asking for help is a sign of weakness or incompetence.
5. **The Superwoman** – Believes she must excel in every area of life—academically, professionally, and personally. She struggles with burnout and feels guilty when she can't keep up with all the demands.



Dr. Valerie Young

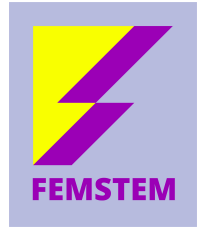


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Which type of impostor you relate to most?



The following questions may help you identify it:

1. Do you set excessively high standards for yourself, and feel like a failure if you don't meet them? (*Perfectionist*)
2. Do you feel that you need to know everything before you can take on a new task or project, and that not knowing all the details makes you inadequate? (*Expert*)
3. Do you feel like success should come easily, and if it takes effort, you worry it means you're not as competent as others? (*Natural Genius*)
4. Do you prefer to do everything on your own and avoid asking for help, because you feel like needing help would prove you are not capable? (*Soloist*)
5. Do you feel like you have to excel in every area of your life (academically, personally, professionally) and struggle with guilt or burnout when you can't keep up? (*Superwoman*)
6. Do you avoid taking on challenges because you feel you must already be an expert before you can attempt them? (*Expert and Natural Genius*)
7. Do you often compare your achievements to others and feel like you come up short, even when you've accomplished a lot? (*Perfectionist or Superwoman*)
8. Do you believe that you can't take breaks or prioritize self-care because you have to be constantly performing at your highest level in everything you do? (*Superwoman*)



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The Impact of Impostor Syndrome

Impostor Syndrome can have a deep and far-reaching impact on personal well-being, academic performance, and career progression.

- ❖ **Decreased Self-Confidence:** Feelings of inadequacy, hindering personal growth.
- ❖ **Chronic Stress & Anxiety:** Constant fear of being "found out".
- ❖ **Burnout & Exhaustion:** Disengagement, health issues, and job dissatisfaction.
- ❖ **Overworking:** Excessive work to avoid failure.
- ❖ **Procrastination:** Delay work because of fear of failure.
- ❖ **Reluctance to Seek Help:** Fear of exposing incompetence, leading to isolation and missed learning opportunities.
- ❖ **Difficulty Accepting Praise:** Discounting compliments or success, reinforcing negative self-perceptions.
- ❖ **Negative Impact on Performance:** Underperformance due to reluctance to take credit for achievements or pursue leadership roles.
- ❖ **Impaired Decision-Making:** Fear of failure leads to risk aversion, missed opportunities, and avoidance of challenges.
- ❖ **Stifled Creativity & Innovation:** Fear of failure prevents the sharing of new ideas and creative risks.
- ❖ **Fear of Success:** Fear that success will lead to negative consequences.



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Do you recognize some of these impacts on your academic or professional career? How have they affected you?



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Learning to Respond to Failure

Behind the Impostor Syndrome lies a **fundamental fear of failure**.

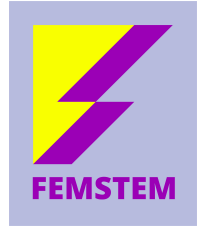
Women are more likely than men to blame themselves for failure. We must learn to respond to failure, mistakes and criticism in a new way.

Steps:

- ❖ Identify the negative thoughts that fuel Impostor Syndrome and reframe them ("I'm not good enough" → "I have the skills and experience to succeed.")
- ❖ It is impossible to do everything *perfectly*. We have to focus on making it *good enough*.
- ❖ Failures offer valuable lessons and opportunities.
- ❖ Failure is not the end of the road.
- ❖ Take the constructive criticism as a gift for improvement, not as a personal offence.



Think of something you have failed to do in your life, the thoughts and feelings that it generated and how you acted. Now, think of another way you could have reacted to it.



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The Power of Self-Compassion and Acceptance

Treat yourself with the same kindness and understanding you would offer a friend.

Understand that everyone experiences self-doubt, and it's okay to make mistakes.

Self-Compassion Techniques:

- ❖ Being warm and understanding toward yourself when you fail.
- ❖ Remind yourself that everyone makes mistakes and has setbacks.
- ❖ Be aware of your thoughts without judging them harshly.
- ❖ Practice mindfulness to manage stress and negative thoughts.



Take a moment to think about a recent mistake. What would you say to a friend who made the same mistake? Now, say that to yourself.



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Building Confidence Through Action

Taking action is how you build self-confidence: action comes *before* confidence.

If you are not confident about it, **DO IT!** (“Fake it till you make it”)

Steps:

- ❖ Document your achievements and track progress: Create a “Success Journal”.
- ❖ Don’t downplay your achievements—celebrate them!
- ❖ Remind yourself yours strengths.
- ❖ Take on small challenges outside your comfort zone to build your self-efficacy.
- ❖ Be bold and take risks!

 Write down a recent achievement (big or small), how it made you feel and the skills and abilities you used for achieving it.

 Think of a small future challenge you are not confident about and visualise how you could achieve it.



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The Role of Mentorship and Peer Support

Why Mentors Matter:

- ❖ Provide guidance, advice, and reassurance.
- ❖ Help normalize feelings of doubt.
- ❖ Offer insight into navigating STEM spaces as a woman.

Why a Support System is Crucial:

- ❖ Counteracts isolation.
- ❖ Provides encouragement and validation.
- ❖ Helps with Impostor Syndrome by offering shared experiences.



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 Visit the MENTOR ZONE!

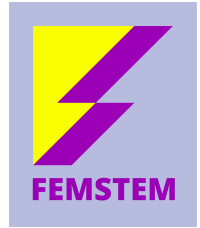
 Identify a partner in your STEM area and share experiences. Identify one way you can support each other moving forward.







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Overcoming Imposter Syndrome: Stories of Women in STEM

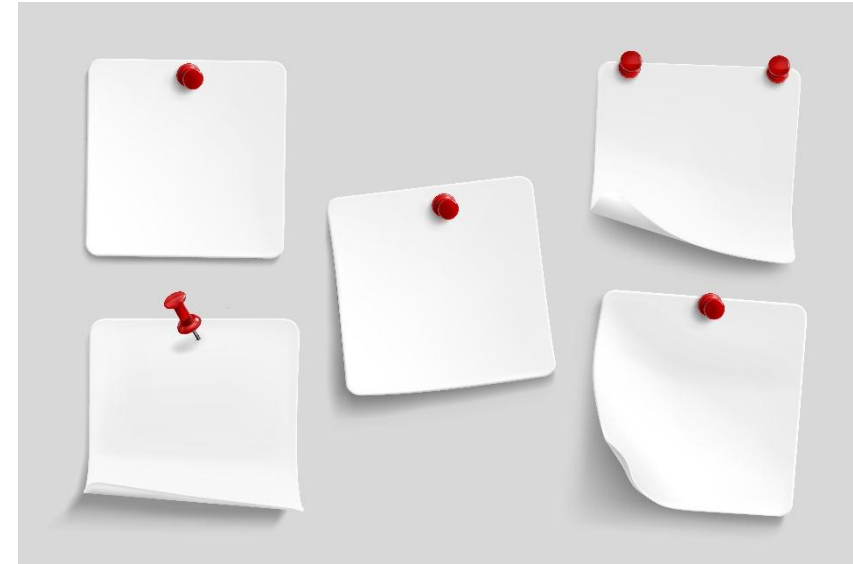


Woman	Field	Struggled with	How she overcame it	Legacy	
Marie Curie	Physics, Chemistry	Self-doubt despite groundbreaking work in radioactivity	Persisted in her research, allowing her achievements to speak for themselves	First woman to win a Nobel Prize; only person to win Nobel Prizes in two different sciences	
Mae Jemison	Astronaut, Physician	Feelings of inadequacy as a woman of color in a male-dominated space program	Embraced her passion for space and sought supportive mentors	First African-American woman in space	
Ada Lovelace	Mathematics, Computing	Doubting her worth in a male-dominated intellectual community	Persisted in her work on the Analytical Engine, pioneering modern computing	Recognized as the first computer programmer	
Karen Uhlenbeck	Mathematics	Feeling like an outsider despite her groundbreaking work in mathematical physics.	Built confidence in her abilities and received mentorship	Revolutionized mathematical physics; first woman to win the Abel Prize	

Has even happened to them. You can overcome it too!


Key Takeaways

- ❖ Impostor syndrome is common but doesn't have to control your life.
- ❖ Recognize which "type" of imposter you relate to and use the strategies to manage it.
- ❖ Embrace support, celebrate progress, and continue to challenge negative thoughts.
- ❖ You are not alone—there's a strong network of women in STEM who support each other.



 Think of a specific situation in which you feel like an impostor. Reflect on how you feel at that moment and what you do.

Now think about what you would prefer to feel and do in that situation.

 Write down one affirmation you will use when you experience self-doubt.

Moving Forward with Confidence

Future actions:

- ❖ Adopt realistic and motivating competition standards.
- ❖ Focus on learning from both successes and failures, both are natural ups and downs in the process of achieving something.
- ❖ If you fail, pick yourself up and try again.
- ❖ The criticism you receive does not define you as an impostor, take it as a way to improve.
- ❖ You don't have to be sure of yourself all the time. Even the most competent people sometimes feel insecure.

Remember:

- ❖ You deserve everything you have achieved so far.
- ❖ All your ideas deserve to be heard and valued.
- ❖ You have the right to be wrong.
- ❖ You have the capacity to learn.



**You are capable,
deserving, and have
what it takes to
succeed in STEM.**

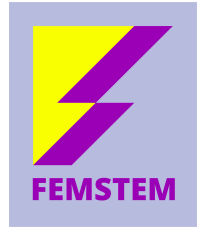


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Additional Resources

Books on Impostor Syndrome

The Secret Thoughts of Successful Women: Why Capable People Suffer from the Impostor Syndrome and How to Thrive in Spite of It. Valerie Young

The Impostor Syndrome: Becoming an Authentic Leader. Harold Hillman

Impostor Syndrome: How to Stop Feeling Like a Fraud and Achieve Your Full Potential. Dr. Jessamy Hibberd

Presence: Bringing Your Boldest Self to Your Biggest Challenges. Amy Cuddy

Lean In: Women, Work, and the Will to Lead. Sheryl Sandberg

Articles on Impostor Syndrome

Why Do So Many High Achievers Feel Like Fraud? Amy Cuddy (Harvard Business Review, 2015)

Overcoming Impostor Syndrome: 5 Ways to Recognize It and Prevent It. (Psychology Today, 2019)

The Impostor Syndrome Is Real, and Here's How You Can Beat It. (Forbes, 2020)

The Impostor Syndrome: A Systemic Issue (Psychology Today, 2021)

Impostor Syndrome Is More Common Than You Think (The New York Times, 2017)



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Additional Resources

Websites on Impostor Syndrome

Impostor Syndrome Institute. <https://www.impostorsyndrome.com>

Psychology Today – Impostor Syndrome. <https://www.psychologytoday.com/topics/impostor-syndrome>

The Center for Creative Leadership – Impostor Syndrome.
<https://www.ccl.org/articles/leading-effectively-articles/why-impostor-syndrome-is-a-leadership-issue/>

MindTools – Impostor Syndrome. https://www.mindtools.com/pages/article/newLDR_87.htm

The Muse – How to Overcome Impostor Syndrome. <https://www.themuse.com/advice/how-to-overcome-impostor-syndrome>

Videos on Impostor Syndrome

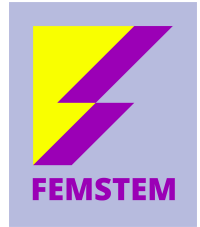
The Impostor Syndrome and How to Overcome It – TED Talk by Dr. Valerie Young (2018).
<https://www.youtube.com/watch?v=yrx7mzhJ2wQ>

Amy Cuddy's TED Talk: "Your Body Language Shapes Who You Are" (TED, 2012)
https://www.ted.com/talks/amy_cuddy_your_body_language_shapes_who_you_are

How to Deal with Impostor Syndrome – Video by Mel Robbins (2019) <https://www.youtube.com/watch?v=-vZXZzQOSIk>

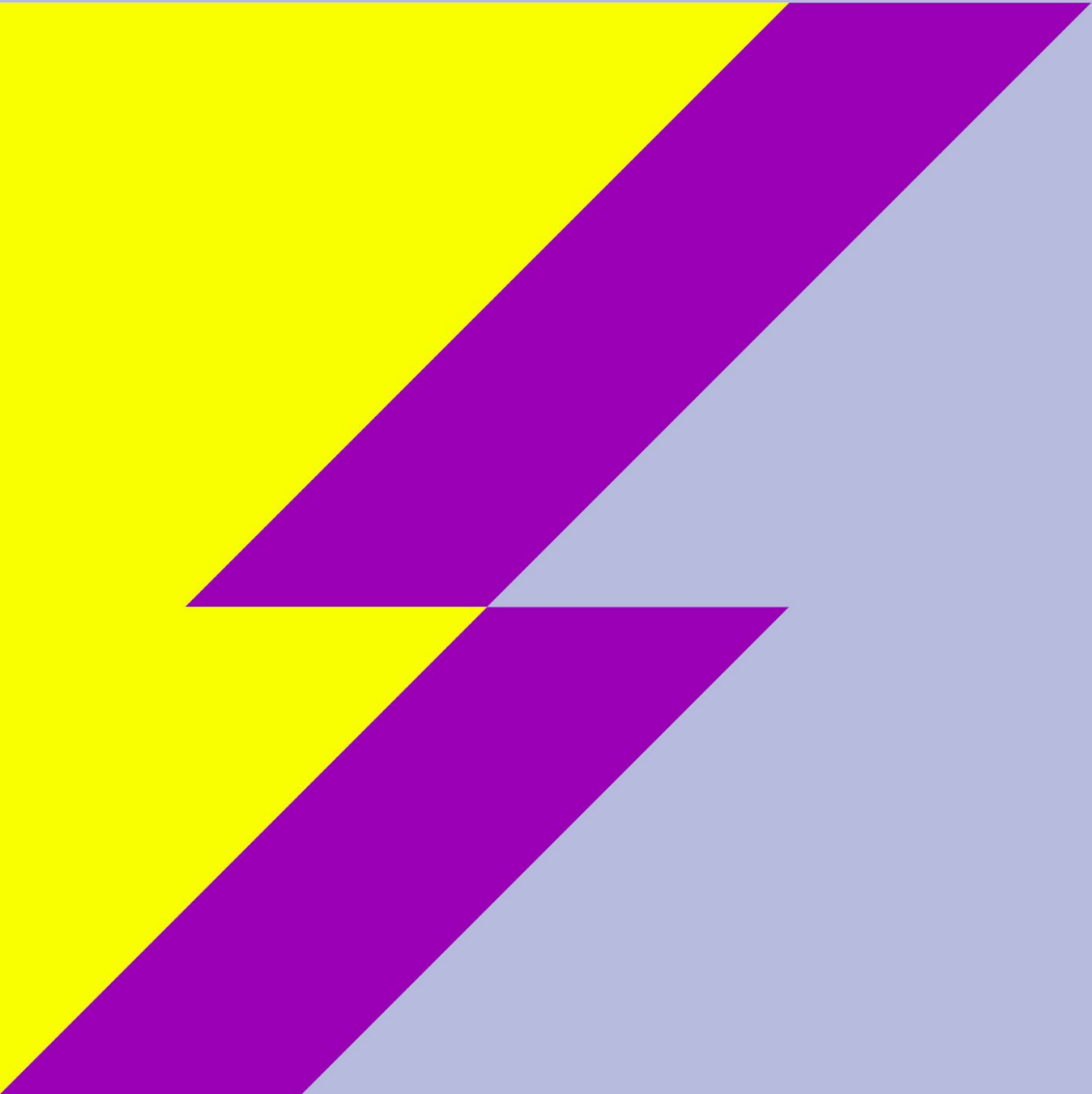
Impostor Syndrome Explained – Video by Psych Hub (2021) <https://www.youtube.com/watch?v=K8ox5udID40>

Impostor Syndrome: How to Stop Feeling Like a Fraud – Video by BetterUp (2020)
<https://www.youtube.com/watch?v=gf6fb8ywm60>



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