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Milestones toward Majorana-based quantum computing[1]

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Experiments on nanowire-based Majorana platforms now appear poised to move beyond the preliminary problem of zero-mode detection and towards loftier goals of realizing non-Abelian statistics and quantum information applications. Using an approach that synthesizes recent materials growth breakthroughs with tools long successfully deployed in quantum-dot research, I will outline a number of relatively modest milestones that progressively bridge the gap between the current state of the art and these grand longer-term challenges. The intermediate Majorana experiments surveyed in this talk should be broadly adaptable to other approaches as well.