Relion-based Automation Pipeline

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We designed an automation pipeline for cryo-EM single particle image analysis based on Relion-4.0. This automation pipeline requires no or little manual involvement, making it easier and more efficient to harvest the idle time of computational resources. Some steps, such as 2D classification, 3D classification, and particle autopicking, usually need to repeat multiple times for selecting good particles. With this automation pipeline, these repeated steps can be flexibly added into the pre-defined workflow. This automation pipeline can also be extended to include more functions and to connect with other tools such as model_angelo. This automated pipeline is functional on both cloud and local workstation.