Retrotransposition is a genetic variation in which transcripts are integrated in the genome, process promoted by retrotransposable elements (i.e., LINEs and ERVs). This is one of the major process remodelling the non-coding region of the genome and is responsible for much non-coding variation. The majority of retrotranspositions comprehend in the mobilization of protein-coding genes (processed pseudogenes), and repetitive elements (Alus, LINEs and HERVs) all of which can have major impacts on genome architecture and significantly contribute to human phenotypic variation and disease development and susceptibility. Despite the importance of retrotransposition for human health, the development of computational methods for their discovery has proven challenging.