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Identification Investigation

In my project, I tested if fingerprint patterns were created randomly or influenced by genetics. I hypothesized that fingerprints weren't influenced by genetics because identical twins have identical DNA, but different fingerprints. Since DNA is specifically tied to genetics, then fingerprints must not be tied to genetics. I tested this by taking the fingerprints of two average families (including parents and two kids) and one three generation family. I also took the fingerprints of 14 individuals unrelated to each other or the families. I then compared the matching fingerprints within the families to the number of matching fingerprints within the individuals using seven different fingerprint types. I found that in the three generation family, eight out of nine children's fingerprints (88.9%) matched at least one of their parents. In both the average families, two out of two children's fingerprints (100%) match their parents. The individual's fingerprints included four loops, six whorls, two accidentals, one arch, and one tented arch. My results did not support my hypothesis. I concluded that while fingerprints are not entirely dependent upon genetics, it appears they are at least influenced by it.