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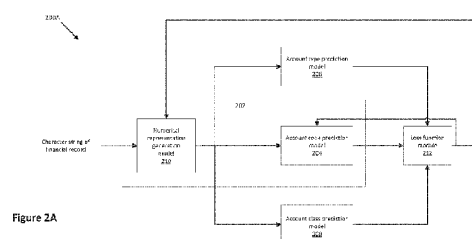


Figure 2A

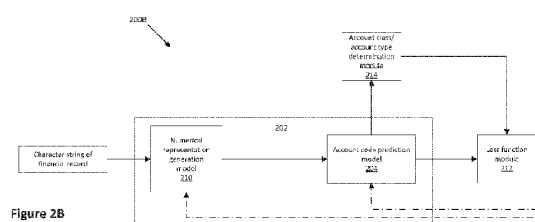


Figure 2B

(57) **Abstract:** Described embodiments relate to a method comprising: determining a training dataset of example documents, each associated with first and second hierarchical level category labels. The method comprises generating a predicted first hierarchical level category and a predicted second hierarchical level category; determining a first loss value and a second loss value based on the predictions; determining a combined loss value based on the first loss value and the second loss value; and adjusting one or more weights of the numerical representation generation model based on the combined loss value.

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