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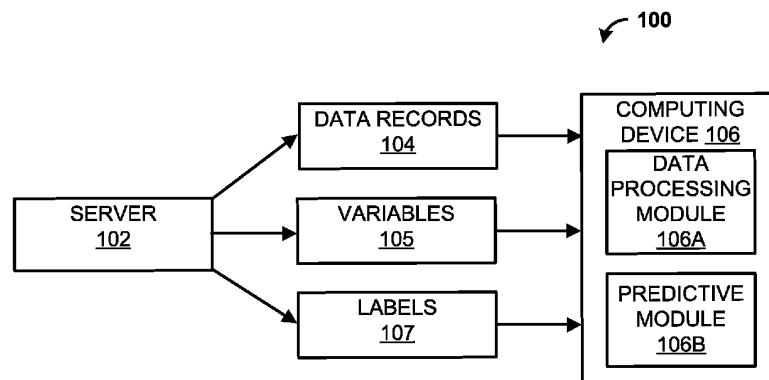
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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

(54) **Title:** METHODS AND SYSTEMS FOR IMPROVED DEEP-LEARNING MODELS

FIG. 1



(57) **Abstract:** Described herein are methods and systems for generating, training, and tailoring deep-learning models. The present methods and systems may provide a generalized framework for using deep-learning models to analyze data records comprising one or more strings (e.g., sequences) of data. Unlike existing deep-learning models and frameworks, which are designed to be problem/analysis specific, the generalized framework described herein may be applicable for a wide range of predictive and/or generative data analysis.

[Continued on next page]

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