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(57) Abstract :

The present invention discloses an AI based uncertainty estimation method for predictive analytics using a data ingestion module (101), a preprocessing and feature construction module (102), a primary prediction engine (103), an evidence extraction module (104), an uncertainty inference engine (105), a calibration module (106), and a decision output interface (107). Reliability cues from input quality, model behavior, and contextual divergence are fused to compute calibrated uncertainty for each predictive output. The system improves confidence awareness, selective automation, and decision reliability across heterogeneous predictive models and changing deployment conditions.

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