

6. CONCLUSIONS

This paper extracts the path features according to the heading effect of the multi-path PINS, and develops an improved LSSVM based on the PCA and the pruning algorithm (PP-LSSVM) for the prediction of PINS navigation accuracy. The PCA and pruning effectively reduced the computing load and enhanced the generalization ability of the prediction model, and ensured the sparsity of model solutions. The simulation experiment proved that the proposed PP-LSSVM achieved high accuracy and consumed a short time in the accuracy prediction of multi-path PINS. The real-time, accurate prediction enables the rapid decision-making in the PINS.

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