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A Universal Deep Learning Approach for Modeling the Flow of Patients under Different Severities

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Highlights

- An integrated deep learning-based framework (DNN-I-GA) is developed for predicting A&ED patient flow under different triage levels.
- A GA-based feature selection algorithm is improved by introducing the fitness-based crossover.
- Manifold regularization strategies are merged into DNN, and all hyper-parameters are optimized efficiently.
- Predictive values are significant indicators of patients' demand and can be used by A&ED managers to make resource planning and allocation.

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