

# Fighting Back Against Emergency Rental Assistance Fraud

**Delaware State Housing Authority**  
Management Innovation: Technology

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**HFA Name:** Delaware State Housing Authority  
**Entry Title:** Fighting Back Against Emergency Rental Assistance Fraud  
**Category:** Management Innovation **Subcategory:** Technology



**Summary:**

In 2021, the Delaware State Housing Authority (DSHA) received a sizable investment in the Delaware Emergency Housing Assistance Program (DEHAP) through two allocations of Emergency Rental Assistance Program (ERA) funding, totaling \$352 million. This influx in funding increased the risk to both program integrity and imperiled the timely delivery of tenancy-saving resources to legitimate applicants seeking assistance from DEHAP. DSHA used artificial intelligence and predictive learning to fight against potential fraud and prevent ineligible cases from receiving aid.

**Context:**

Delaware launched DEHAP in March 2020 after the public health emergency declaration regarding COVID-19. Recognizing that many Delaware tenants could not pay rent due to employment shutdowns, closures or layoffs, reduced work hours, unpaid leave, and other financial hardships related to the health crisis, DSHA leveraged state and local funding to provide limited rental and utility assistance to qualifying households. Months later, DEHAP received substantial funding through the CARES Act.

In 2021, DEHAP subsequently received two infusions of funding through ERA. Delaware received an allocation of \$200 million in ERA 1 funding and \$152 million in ERA 2 funding. This unprecedented investment demanded DSHA scale up the program quickly to deploy resources per the U.S. Department of Treasury's expectations and the community's extraordinary need. DSHA forged partnerships to launch an online application portal designed to be highly accessible to qualifying landlords and tenants and took measures to promote the program and the portal widely.

Several months into the implementation of ERA, the challenges of having such a public-facing and accessible application portal became apparent. Amongst the program's demands, DSHA began identifying patterns of suspicious activity among application submissions, including a surge of potentially fraudulent and bot-generated applications. This influx increased the risk to both program integrity and imperiled the timely delivery of tenancy-saving resources to legitimate applicants seeking assistance from DEHAP. DSHA acted quickly to strengthen capacity and prevent ineligible cases from receiving aid.

**Summary of the Program:**

DSHA engaged Witt O'Brien, a crisis and emergency management organization, and KPMG LLP, a professional audit, tax, and advisory firm, to develop a robust fraud detection model to assist DSHA with identifying potentially fraudulent application submissions to DEHAP. The model escalates specific requests for a higher level of review and denies cases determined to be ineligible for program assistance based on concerning characteristics.

Using historical applications submitted to the program and either awarded or denied assistance due to suspected fraud, the team developed and trained a predictive model to determine whether incoming applications were highly suspicious and potentially fraudulent.

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To develop this model, the team selected a logistic regression algorithm using a combination of variables and features highly correlated with fraudulent applications. The use of AI technologies greatly reduced manual effort and shortened the analysis period.

This algorithmic model, combined with higher-level human review, significantly increased efficiency and effectiveness in the face of thousands of suspicious submissions. This efficiency enabled DSHA to make informed, actionable fraud risk decisions, deploy a lean potential fraud review team, and implement potential fraud procedures based on key fraud indicators and case characteristics.

After training the model, KPMG then provided a random sample of the model's results to the Potential Fraud Review Team at Witt O'Brien to confirm the model's predictions. Based on this feedback, KPMG re-trained the predictive model to generate more accurate and precise results. This process was repeated until DSHA was comfortable with the model's predictions.

The team developed risk thresholds to stratify applications into different risk buckets from there. Applications assigned to higher risk categories were slated for a higher level of review by specialized Quality Control/Quality Assurance team members. This cleared the review pipeline for legitimate application submissions, reducing the review time for those applications from weeks to days.

### **Benefit & Results**

DEHAP received over \$192 million in requests from suspected fraudulent cases. The fraud detection model identified and screened these applications before they could siphon money from this critical assistance program.

Over 13,000 suspected fraudulent applications were requesting \$14 million in payments, which the DSHA team was able to identify and prevent payment during the higher-level human review.

As a result of DSHA's immediate call to action and the potential fraud protocols put in place, the model was over 98% effective in stopping payment on submissions identified as potentially fraudulent.

Incorporating intuitive and innovative technology allowed DSHA to expeditiously and accurately promote housing stability, reduce displacement and keep the eviction rates low.

To date, DSHA has assisted more than 16,000 households across more than 25,000 cases (recertifications included). In 2022, Delaware was recognized at the White House Eviction Prevention Conference for using its rental assistance program to keep eviction rates low during the COVID-19 pandemic and even after federal and state eviction protections had expired.

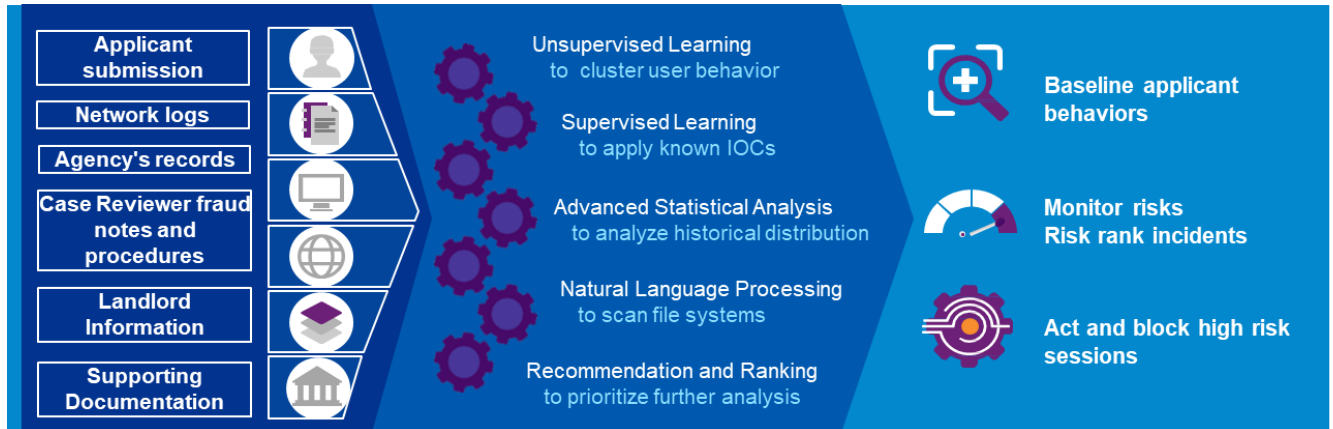
The innovative predictive algorithmic solution, combined with iterative learning guided by high-level human review, allowed DSHA to safeguard resources while maintaining the rapid deployment of this tenancy-saving resource.

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## VISUAL AIDS

### Fraud Prevention Analytics Overview



**Sample Daily/Weekly Predictions File**

### Fraud Review Tool

Use this tool to accurately review and examine potential fraud (PF) cases. This is our procedure for investigating concerning characteristics flagged on PF cases.

Hi, Charles. When you submit this form, the owner will see your name and email address.

\* Required

**1**

Case Number \*

Enter your answer

**2**

What is the current status of the case at the time of this review? \*

☐ In progress

☐ Ready For Supervisor Approval

☐ Approved

☐ Denied