Case Study | Saarland State Police

AI-based plausibility check of accident reports with Scheer PAS

The Saarland police force is currently facing a shortage of personnel, and highly qualified staff members are spending a lot of time dealing with routine jobs that are time-consuming, cost-intensive, and error-prone. Some tasks have also become increasingly complex. To address these challenges, there is a need for process automation. By quickly identifying and optimizing processes that have a high degree of standardization, innovative technologies can be used to relieve the administrative workload. Automation can result in time savings and increased efficiency, and integration into the specialist system can resolve problems with media breaks. Furthermore, automated data collection and plausibility checks of accidents can be achieved, which can lead to an improvement in the quality of tests and a reduction in errors.

Challenge

- Highly qualified staff dealing with time-consuming, cost-intensive and error-prone routine jobs
- A shortage of personnel
- Growing complexity of certain tasks

Solution

- Quick processes identification and optimization
- Great potential because of high degree of standardization
- Relief of time-consuming administrative work through the use of innovative technologies

POLIZEI

Saarland State Police

The Saarland Police is the official state police force of the German federal state of Saarland, comprising approximately 3,200 employees, including around 2,700 law enforcement officers. The State Police Headquarters operates under the purview of the Saarland Ministry of the Interior, Building and Sport.

Results

- Automated data collection and plausibility checks of more than 35,000 accidents per year
- High time savings and increased efficiency through automation of the tests
- Resolved media breaks problems with integration into the specialist system
- Increased quality and minimized errors in the tests

Shortage of personnel and too many manual routine jobs

The Saarland police have been working on process automation and digitization for quite some time. Increasing shortages of personnel, the growing complexity of certain tasks and the large number of manual routine jobs call for intelligent solutions. How can highly qualified staff be relieved of time-consuming, cost-intensive and error-prone routine jobs? Monotonous and redundant processes need to be streamlined, optimized and automated in order to increase process efficiency and data quality.

Fig. Plausibility check process to date

Motivation through initial successes with artificial intelligence

Even today, innovative technologies are already being successfully employed by the police in various areas, such as the security screening of applications for residence permits, in order to process the large numbers of applications efficiently and with minimum tie-up of staff resources. The extensive automation of this process has now enabled 85% of the time to be saved.

After joint deliberations with the Saarland police, a further process was quickly identified which – performed completely manually to date – offered great potential for automation due to the high degree of standardization and the large number of cases: the plausibility check of accident reports.

Special features of the plausibility check of accident reports

All data recorded at the scene of an accident is input into POLADIS, the incident processing system, a specialist application for the accident statistics, among other things. For the plausibility check, the data has to be exported from the system and then checked one by one. In addition to the accident report, further parameters such as the accident cause and the accident type are added. The technical correctness of the data is important, as it forms the basis for further far-reaching – and also legally relevant – analyses and for traffic accident statistics. If discrepancies are discovered during the check, the documents are returned to the original reporting officer for correction. The manual checking of each case makes the process extremely time-consuming, even though the data is correct in the vast majority of cases.

Higher efficiency and minimized error

This is exactly where the solution comes in. In future, only those cases that need to be corrected will be returned to the original reporting officer for checking; all others where a clear allocation can be made by the AI will no longer be checked manually. The process is now to be automated and the plausibility of the data ensured with the aid of artificial Intelligence. The latest technologies from the field of natural language processing are used to interpret the technical language of the accident reports and to allocate them to the relevant categories.

Excursion Road traffic accident statistics

The road accident statistics provide data on the number of accidents, the persons involved in the accidents, the number of persons injured as a result of the accident as well as on the causes of the causes of accidents and the severity of the accident consequences. The enables an accident situation report (assessment of the local and supra-local accident situation) to be prepared. The statistics are collected according to uniform national rules.

The results of the traffic accident statistics form an important basis for obtaining knowledge about the occurrence of accidents and their development. They are indispensable for the following:

Fig. Plausibility check process in the future

How it works

For each of the categories "accident cause", "accident type" and "accident category", Scheer.ai trains a deep neural network based on state-of-the-art frameworks that ultimately performs the categorization. During the project, an interface was created for the integration of the accident reports to be checked with Scheer PAS that enables the seamless integration of Scheer. ai into the existing process and existing IT systems. The pure accident reports without personal data are exported from the source system and then automatically checked for plausibility. Scheer PAS thus integrates all the components, such as AI, incident processing system, etc. necessary for the smooth implementation of the process.

- Aobservation of the current accident situation and its development in the national, but also international comparison
- police and local authority road safety work
- identification of problem areas in road safety and the categorization of risk groups
- the development and preparation of decisions, measures and planning projects in the field of transport policy
- measuring and evaluating the effectiveness of decisions, measures and other influences on road safety
- the work of the traffic accident commissions

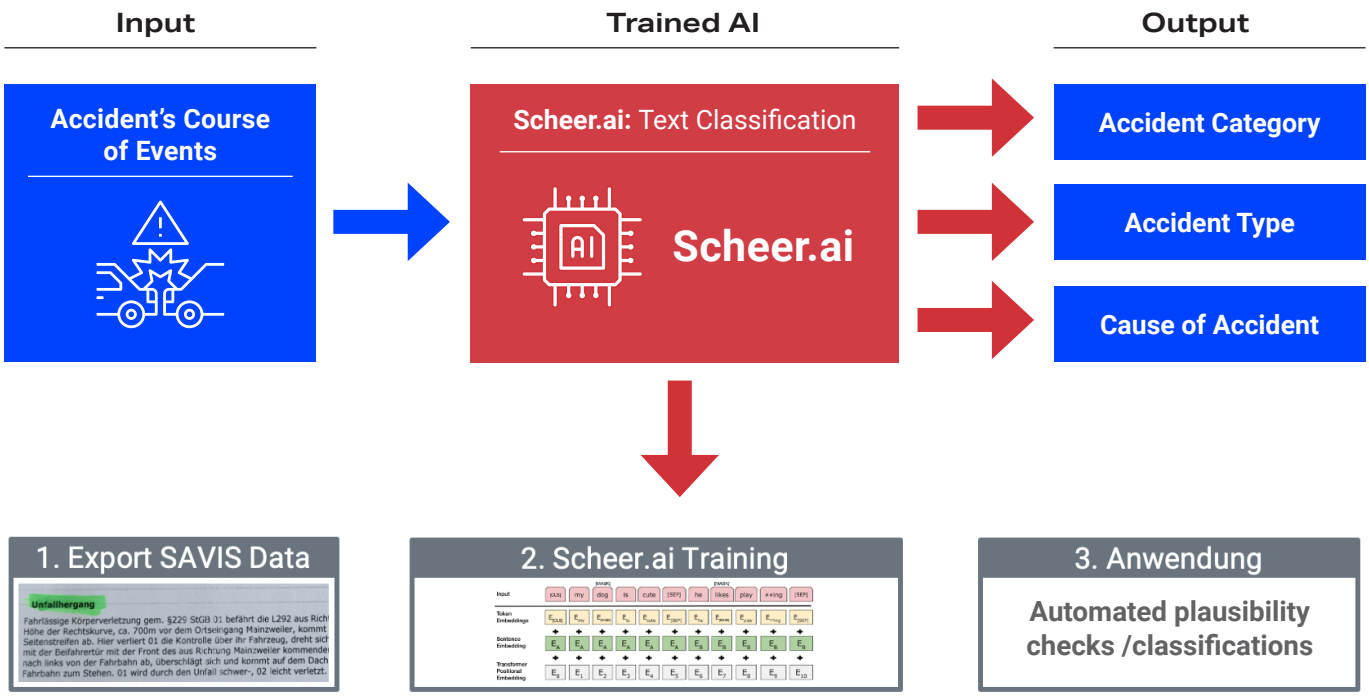

Fig. AI-based classification of accident reports

Benefits for the police in the Saarland

- Reduction in the workload by over 80%
- High time savings and increased efficiency through automation
- Automated data collection and plausibility checks of more than 30,000 accidents per year
- No more media breaks (previously: data processing in Excel, lack of integration into the specialist system, manual checks)
- Increased quality of and error minimization in the checks thanks to self-learning AI
- Impetus for the expansion of process automation and AI into other areas
- No evaluation or use of personal data required
- Secure operation in accordance with data security legislation in a dedicated infrastructure environment

About Scheer PAS

Existing (monolithic) business applications often no longer meet the requirements that companies face today. Digital transformation, market disruptions, and increasingly demanding customers necessitate innovative business applications to meet the new expectations in the digital age.

Scheer PAS is an Application Composition Platform that helps companies eliminate inefficiencies and establish agility and flexibility. This is achieved through a unique combination of integration (iPaaS), application development, and process automation in a single Low-Code experience for both business users and developers.