FAST – Feedback-guided Automation of Sub-tasks

Our FAST Framework
Helps clients with decision making tasks based on visual information (e.g. quality inspection, medical diagnosis, …) with limited data available
Who want to reliably automate these decisions
By identifying the samples that can be automated and delegating the remaining samples to an expert
And unlike classical approaches we provide an easy to deploy, early solution that improves based on the expert feedback over time

1. Problem / Challenges (inkl. Target Group)

The applicability of ML solutions to real world applications is often limited by the need for large amounts of training data. Especially for small enterprises or when working with tasks that require special expertise (e.g., medical), applying ML is often impractical due to the high cost, effort and risk associated with data collection and labeling. Target Group: Users with tasks that can be automated based on visual information where an expert is available, but data is sparse.

2. Solution / Results

Instead of entirely solving a problem, a sub-problem is identified based on a small initial set of data. A system is deployed that is targeted to solving this sub-problem reliably (minimization of errors). Samples that do not belong to that sub-problem, and can therefore not be processed automatically, are delegated to an expert. The expert feedback can be utilized to increase the scope of the solution so that more and more samples can be automated while the system is already in use.

3. Benefit / Offer

- **Immediate assistance:** Instead of a long data collection phase upfront a partial solution is deployed early and already assists in the task.
- **Lower barrier & risk:** Easy setup and only a small amount of initial data is required.
- **Increase efficiency:** The expert can focus on the problems that require expertise.
- **Trust in the system:** By working alongside the system, acceptance and trust can be established.

4. USP

- Most research focuses on "maximizing overall accuracy with few data points" while we focus on "minimizing errors on a specific subset". This makes the system more reliable and allows for early deployment.

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Contact us for more information

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