FORTISSIMO
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FFPLUS SUCCESS STORY:
INNOVATION STUDY

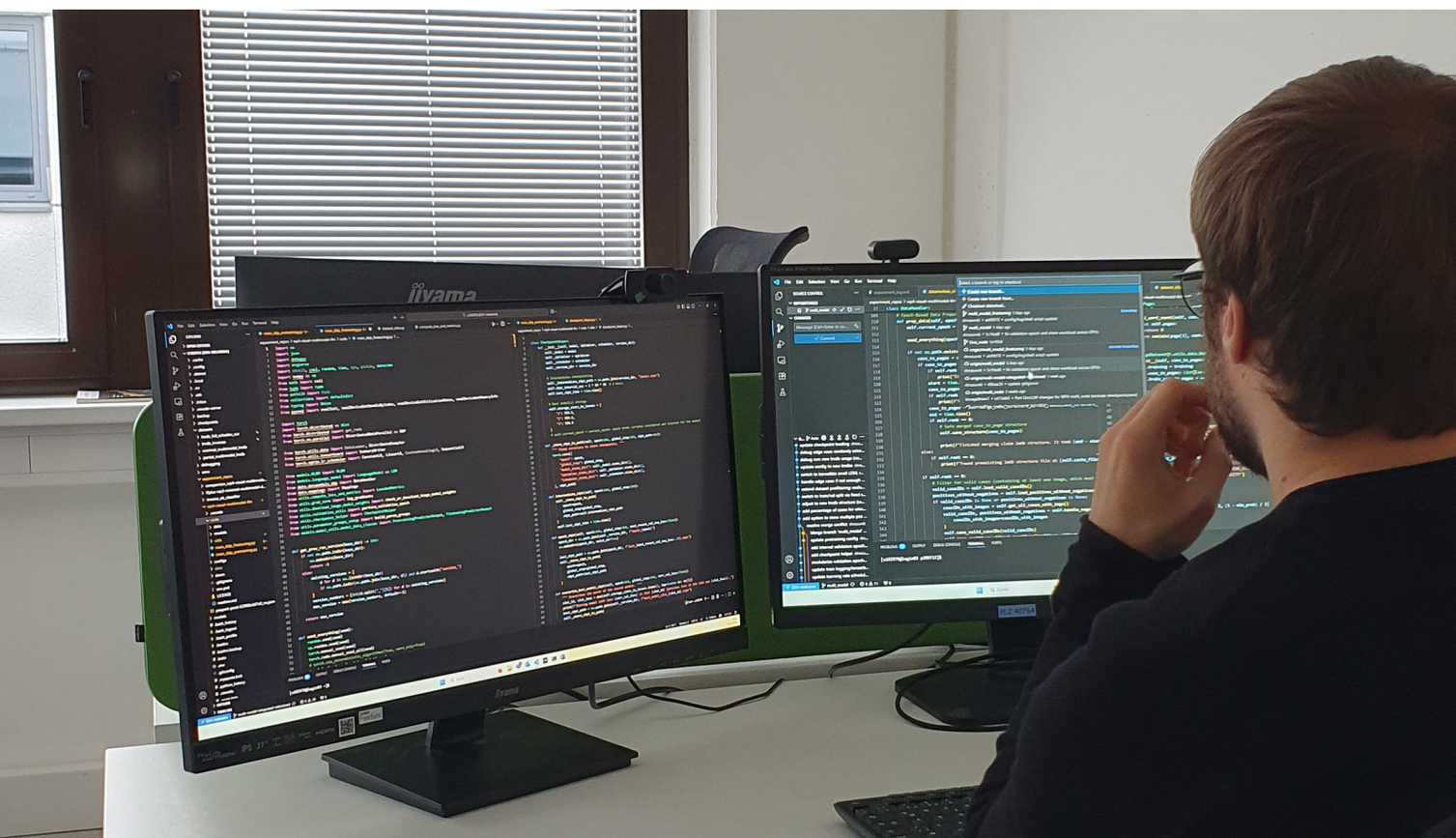
MULTIMODAL FOUNDATION MODEL FOR GERMAN PROPERTY INVOICE CHECKING

ORGANIZATIONS

PropertyExpert GmbH (PX) is a German technology provider for the property insurance and real estate sectors. It supports insurers, retailers and portfolio managers with AI-enabled digital claims processing. PX combines domain expertise, structured document workflows and machine learning to deliver fair, consistent and efficient property damage assessments.

THE CHALLENGE

PX were limited to automated text-only checks, but claim decisions often rely on photographic evidence of damage. Generic image-text models frequently omit industry-specific repair details, so PX turned to a domain-trained multimodal model to scale automation, improve accuracy, and keep costs predictable. Training at image scale exceeded its in-house compute capabilities, so deployment of HPC was essential.



Technology used: HPC, AI, Data Engineering
Industry Sector: Insurance

THE SOLUTION

PX developed a multimodal AI pipeline linking invoice text, repair descriptions and damage images within a unified foundation model. Image encoders and fusion layers connect visual evidence with structured document data to validate quotations and invoices. Using the MeluXina HPC system, PX executed iterative data preparation, pretraining and fine-tuning across distributed nodes, enabling rapid experimentation and measurable accuracy improvements.

THE IMPACT

Access to HPC infrastructure enabled PX to design, train and validate a domain-specific multimodal foundation model at production scale. The resulting 4% increase in automated invoice decisions translates into estimated annual administrative savings of around €100,000 while strengthening PX's position in the German property insurance market. Faster and more reliable verification improves insurer response times during peak weather events and reduces operational bottlenecks caused by limited lossadjuster capacity.

For policyholders and contractors, improved decision accuracy supports fairer, more transparent outcomes and reduces disputes linked to invoice interpretation. Accelerated approvals help households restore damaged properties more quickly after storms or floods.

Greater digital validation has reduced unnecessary site visits and repeat inspections, lowering travel-related emissions. Optimised distributed training and mixed-precision workflows have also improved computational efficiency, supporting more sustainable large-scale AI deployment.

BENEFITS

- Fewer disputes and follow-up inspections, faster claim decisions.
- 4% increase in automated validation.
- €100k annual administrative savings.
- +1.2% decision accuracy improvement.
- 2.8× training speed gain.