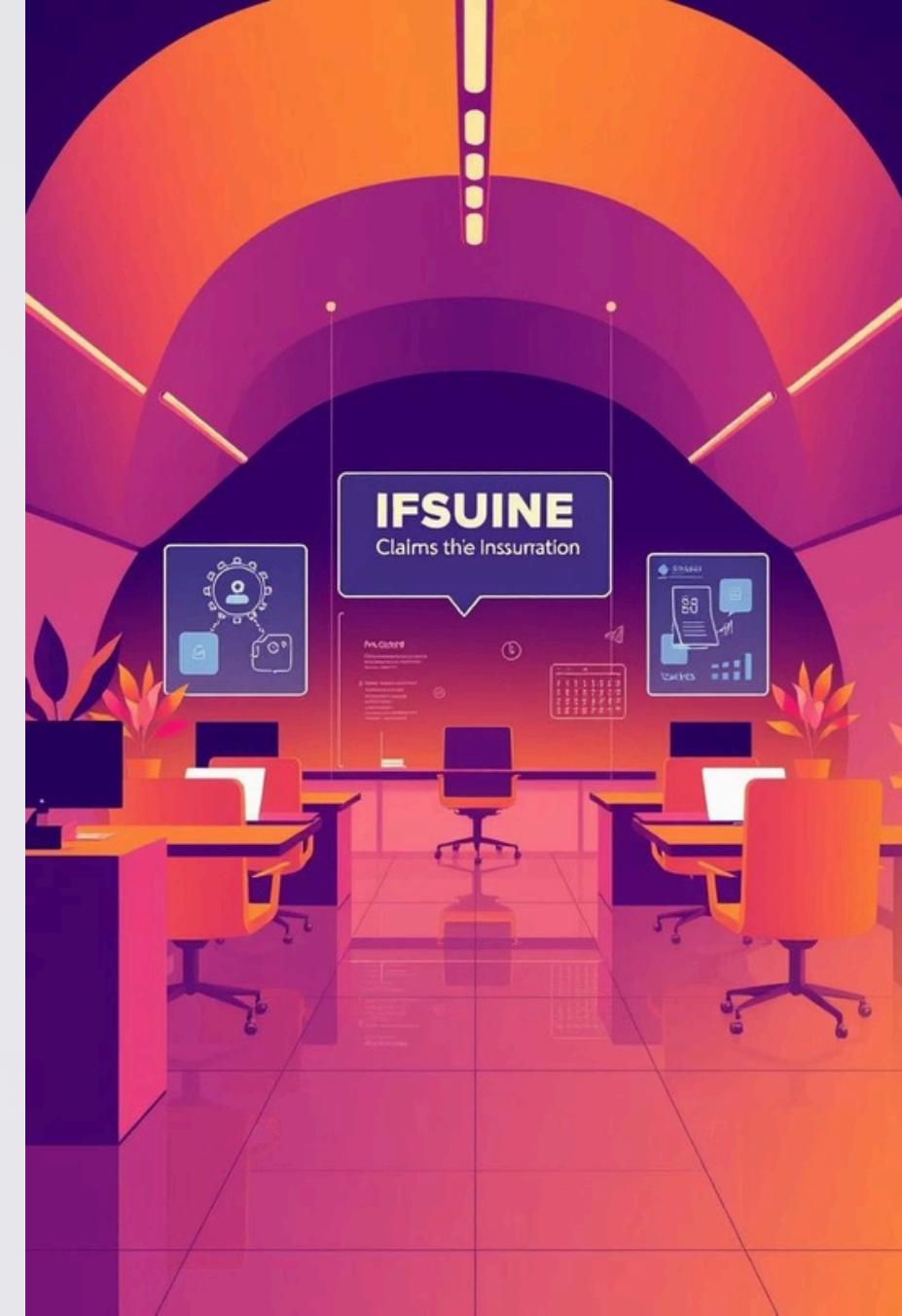


# GenAI Claims: AI-Powered Insurance Claim Automation

Transforming insurance operations with intelligent, automated claim processing.

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# Project Overview: Revolutionizing Claims Processing

GenAIClaims is an innovative solution designed to automate the entire insurance claim lifecycle using advanced generative AI capabilities. Our goal is to streamline operations and enhance the customer experience.



## AI-Driven Automation

Utilizes generative AI for intelligent claim processing from start to finish.



## Core Focus Areas

Claim intake, data extraction, fraud detection, and real-time notifications.



## Key Objectives

Reduce delays, eliminate human errors, improve transparency, and ensure scalability.

# Addressing the Challenges of Traditional Claim Handling

Current insurance claim processes are often burdened by manual steps, leading to inefficiencies and dissatisfaction. GenAI Claims tackles these critical pain points head-on.

## → Manual & Slow Processes

Traditional handling is labor-intensive, leading to significant delays and bottlenecks.

## → Paperwork & Delays

Extensive physical documentation causes prolonged processing times and customer frustration.

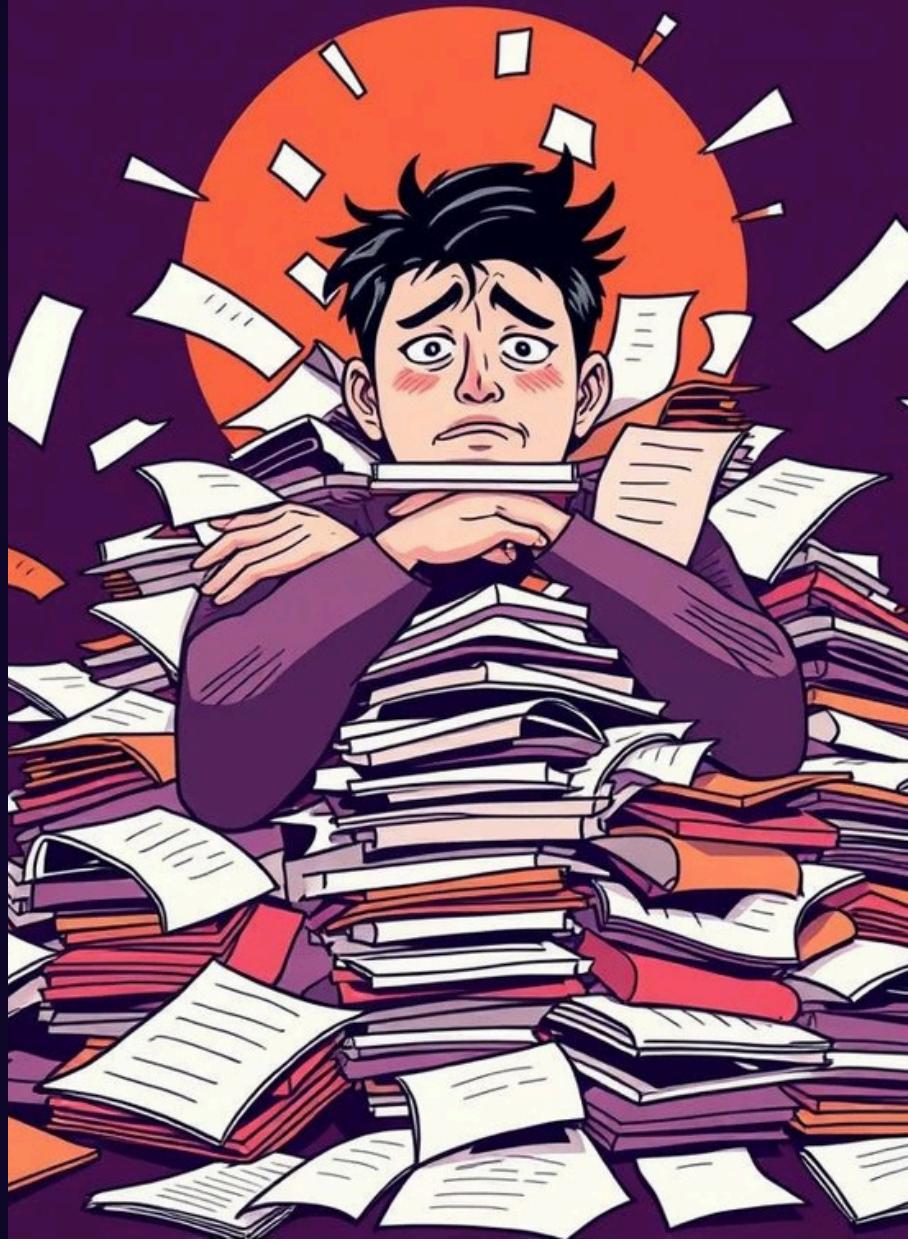
## → Error & Fraud Risk

Incomplete records increase the likelihood of human errors and undetected fraudulent claims.

## → Lack of Transparency

Customers often lack real-time updates, leading to anxiety and repeated inquiries.

# PAPERWORK MOUNTAIN





# Technical Foundations: Hardware & Software Requirements

Our solution is built on a robust, scalable architecture, combining modern web technologies with powerful AI capabilities and multi-channel communication tools.

## Hardware Essentials



Requires standard laptop or PC with internet access, supported by a scalable cloud server for hosting the application.

## Frontend Interface



Developed using a standard web stack: HTML, CSS, and JavaScript for an intuitive and responsive user experience.

## Backend Framework



Utilizes FastAPI (Python) for high-performance APIs, with SQLite serving as a lightweight, efficient database solution.

## AI & Notifications



Integrates OpenAI API for advanced data extraction, Twilio, and SMTP for seamless multi-channel alerts.

# Empathy-Driven Design: Meeting User Needs

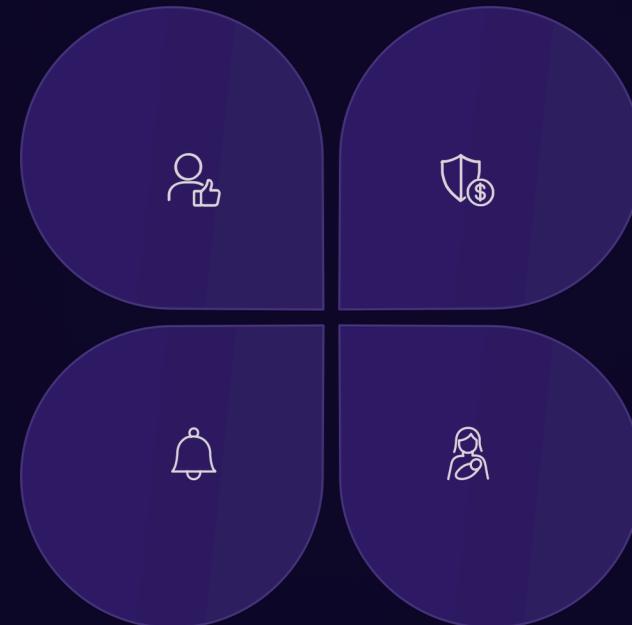
GenAI Claims is designed with a deep understanding of the diverse needs of all stakeholders, ensuring a user-centric experience that fosters trust and efficiency.

## Customers

Desire quick, transparent, and hassle-free claim settlements.

## AI System

Delivers instant acknowledgments, reminders, and critical fraud/progress alerts.



## Agents

Need structured data, robust fraud detection, and streamlined workflows.

## Caregivers

Require timely progress notifications for peace of mind.

# Abstract: The Promise of GenAI Claims

Our solution offers a comprehensive, intelligent, and reliable platform for insurance claim automation, significantly enhancing operational efficiency and stakeholder satisfaction.

## Automated Workflow

Fully automates claim submission, data extraction, and immediate fraud detection.



## Reliability & Trust

AI capabilities are backed by robust rule-based fallbacks, ensuring data integrity and reliability.

## Multi-Channel Communication

Provides real-time updates through various channels, building trust and transparency with users.



# Core Modules: The Anatomy of GenAI Claims

GenAI Claims is structured into distinct yet interconnected modules, each playing a crucial role in delivering an end-to-end automated claims experience.

01

## Claim Submission

User-friendly web interface designed to simplify the claim filing process and minimize paperwork.

02

## Data Extraction

Utilizes advanced AI and rule-based logic to accurately extract critical information from claim documents.

03

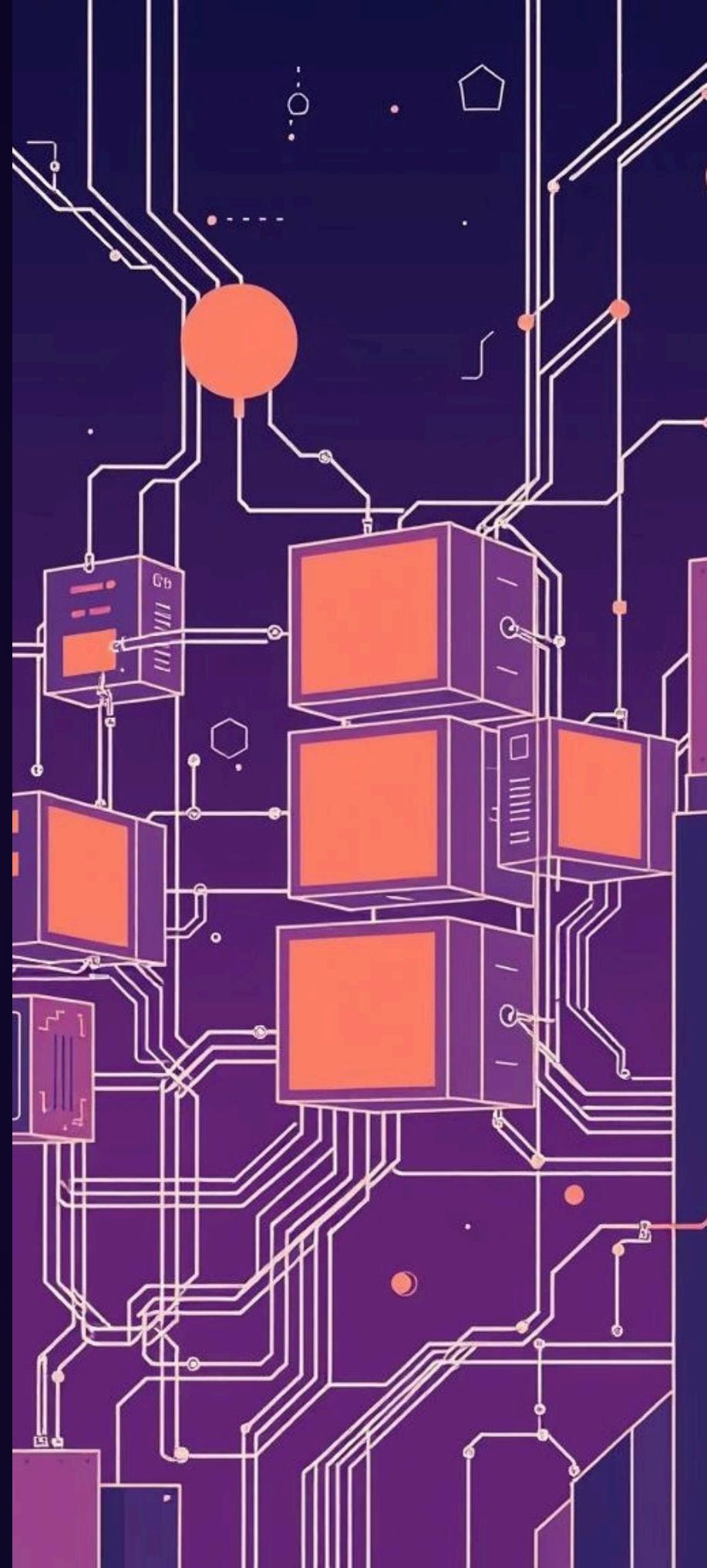
## Database & Fraud Detection

Secure SQLite database for record storage, with continuous background checks for potential fraud.

04

## Notification & Dashboard

Delivers real-time updates to customers and provides agents with a comprehensive claims management dashboard.



# Algorithmic Power: Intelligence Behind the Automation

Our system leverages a sophisticated suite of algorithms to drive efficiency, accuracy, and timely communication throughout the claims process.

1

## Data Extraction

Employs Large Language Models (LLMs) for complex data parsing, complemented by regex for precision.

2

## Fraud Detection

Implements rule-based checks to identify duplicate or invalid claims, enhancing security.

3

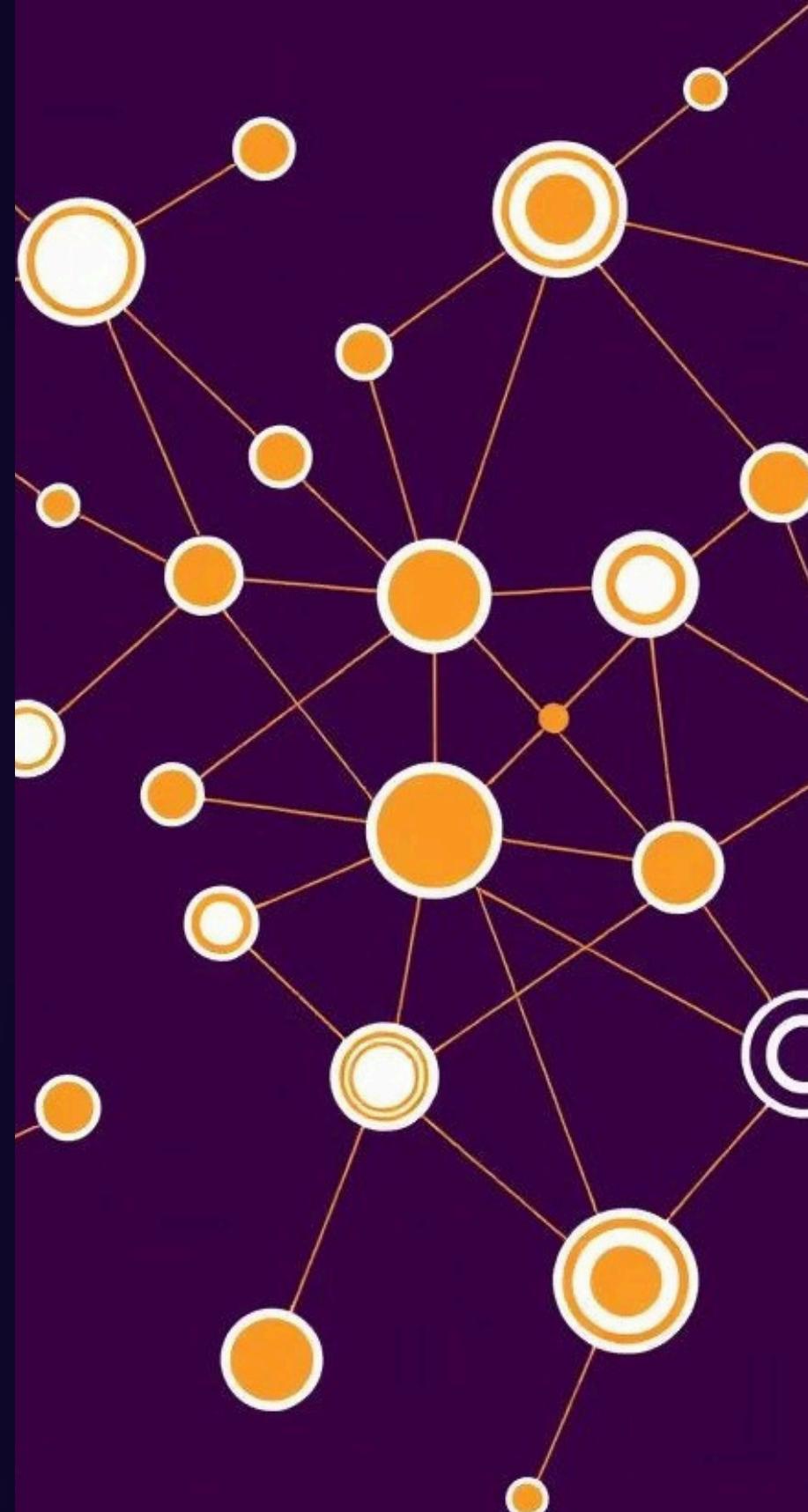
## Notification Scheduling

Utilizes event-driven triggers to ensure instant and relevant multi-channel alerts.

4

## Claim Prioritization

Incorporates a dynamic scoring model to handle claims based on urgency and impact.





# Validating Innovation: Literature Survey Highlights

Our approach is grounded in leading research, demonstrating the proven impact of AI and advanced technologies in the insurance and fintech sectors.

## IEEE Access, 2023

AI significantly accelerates claim processing and reduces errors, validating our core premise.

## IEEE TNN, 2022

Machine learning proves highly effective in early fraud detection, a key component of GenAI Claims.

## Nature, 2021

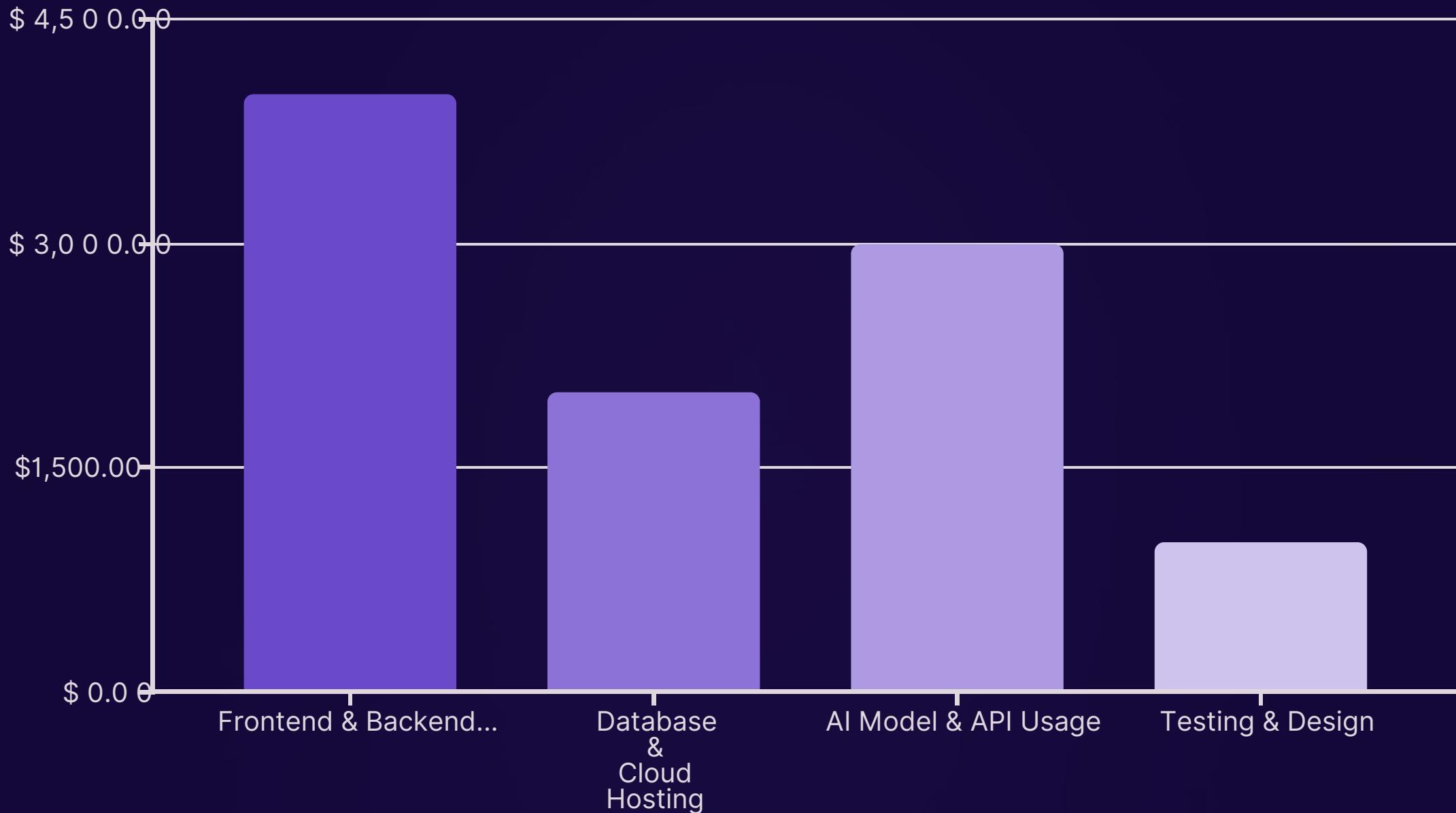
Generative AI excels at extracting structured data from unstructured documents, central to our data intake.

## IEEE IoT Journal, 2020

Real-time alerts are crucial for improving transparency and building trust in financial technology solutions.

# Estimated Cost for MVP Development

A breakdown of the minimal viable product (MVP) investment, designed for efficient resource allocation.



The budget allocation prioritizes core development and essential AI integration, with a lean approach to infrastructure and quality assurance.

Total MVP Cost: <sup>1</sup>\$10,000