GRISEO AI

Engineering Data
for a Smarter World

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About
Company

We specializes in digital transformation, machine learning, artificial intelligence, data science, and cloud computing. We empower businesses to move beyond the numbers and extract meaningful insights from complex, large-scale data through our advanced analytical expertise. Our team of skilled software developers, programmers, and data scientists brings your digital technology and AI projects to life.

Vision &
Mission

To be the leading catalyst for innovation, transforming businesses worldwide through cutting-edge digital technologies, unlocking limitless potential and driving sustainable growth.

Mission

Our mission is to empower businesses to harness the full potential of digital transformation by delivering advanced solutions in machine learning, AI, data science, and cloud computing.

Our Services

Data Engineering Services

- *Data Collection & Pipelines*
- *ELT/ETL & Data Storage*
- *CI/CD Data Processes*
- *Data Modification, Integration & Migration*

Machine Learning Services

- Media & App Analysis
- Automation & Data Handling
- Insight Acquisition
- NLP & Text Data Extraction

Natural Language Processing

- *Live Audio Transcription*
- *Text Analytics & Sentiment Analysis*
- *Document Mining & Knowledge Graphs*
- *Chatbot Solutions*

Cyber Security Services

- *Vulnerability Assessment*
- *Penetration Testing*
- *Gap Assessment against security standard and frameworks (e.g. ISO-27001, CIS Critical Controls, HIPPA ,PCI, GDPR, NCA ECC (Saudi Arabia)*

Business Intelligence

- *Big Data Analytics*
- *Data Visualization & Reporting*
- *Business Gains & Informed Decisions*

Deep Learning Services

- Quality Inspection & Disease Detection (Grain, Plants, Livestock)
- Speech Recognition & Image Classification
- Video Analytics

Computer Vision Development

- *Oil Pipeline Inspection & Object Detection*
- *OCR & AI Image Processing*
- *Emotion Detection & GANs Facilities*

Mobile Apps Development

- Custom Mobile App Development
- Mobile App Consulting
- API Integration
- App Testing and Quality Assurance

Our Process

1. Requirements Analysis

Multilayered stakeholders are engaged to brainstorm, plan, and analyze development objectives & requirements.

2. Technical Specification

A detailed technical design specification document is created describing the purpose, functionality, and scope of work.

3. Solution Architecture

A solutions architecture is laid out outlining the execution strategy and each product component in detail.

4. Project plan

Multilayered stakeholders are engaged to brainstorm, plan, and analyze development objectives & requirements.

5 . Implementation

The implementation stage of putting the project plan into action is critical for ensuring that all planned activities are executed effectively and efficiently.

6. Product Deployment

Our product design and management teams ensure your product is deployed according to your market strategy.

7. Quality Assurance

Exhaustive user, security, and functional testing is performed to deliver on our promise of quality.

8. Post-development Support

We provide a comprehensive support system to accommodate any and all client needs.

Our
Projects

OWO) : One-Window Operation for Government Services for Tourists

In an effort to streamline and enhance the experience for tourists visiting our country, we have implemented a comprehensive One-Window Operation (OWO) that consolidates various government-related services into a single, user-friendly interface. A strategic initiative of the ***Ministry of Tourism and Ministry of economy*** *driven by commitment to bolster the tourism sector.*

Goals & Challenges :

The project aims to boost tourist satisfaction, encourage repeat visits, and elevate the country's reputation as a premier destination by developing a one-window operation platform. This platform will consolidate services into a single point of contact, enhancing operational efficiency within government departments. Key challenges include improving service efficiency, ensuring regulatory compliance, and strengthening information security. Additionally, the platform will utilize advanced data analytics to identify and mitigate security threats, reduce administrative costs, and optimize resource allocation.

Technical Details

Integration of Services:

- *The OWO system integrates multiple government departments, providing tourists with a seamless experience when accessing services such as visas, permits, travel information, and emergency assistance.*
- *This integration reduces the complexity and time required for tourists to navigate different bureaucratic processes.*

Data Lake Implementation:

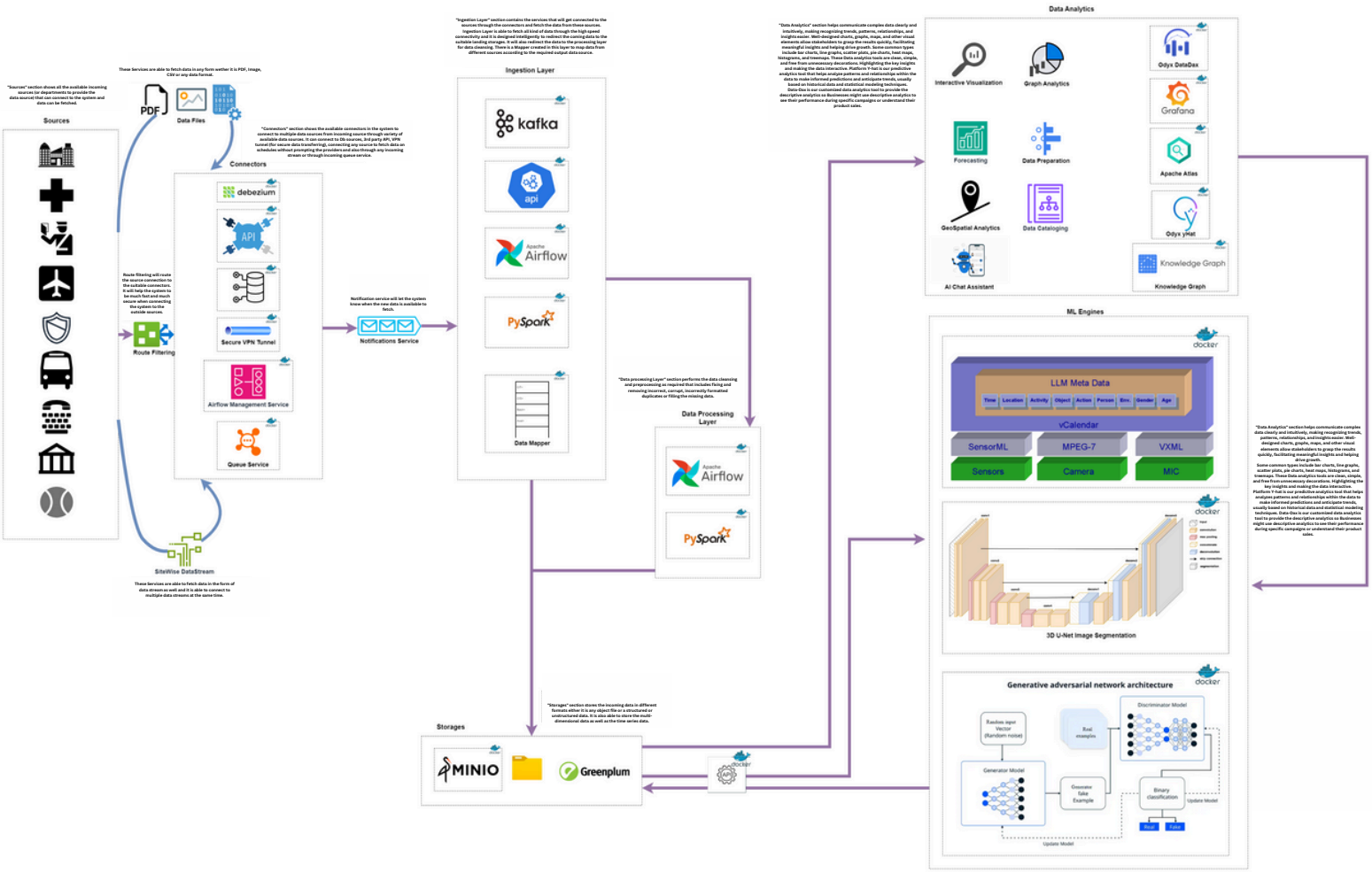
- *A sophisticated data lake has been established to aggregate and analyze data from various government services.*
- *This centralized data repository allows for comprehensive insights into tourist behaviors, preferences, and needs, enabling more informed decision-making and targeted improvements.*

Predictive Analytics:

AI technologies are employed to analyze historical and real-time data, forecasting trends in tourist arrivals, peak seasons, and potential bottlenecks in service delivery.

Conclusion

By simplifying access to government services and harnessing data-driven insights, we are poised to offer an unparalleled visitor experience, ultimately contributing to sustainable economic growth.



"Sources" section shows all the available incoming sources (or departments to provide the data source) that can connect to the system and data can be fetched.
Sources
These Services are able to fetch data in any form wether it is PDF, Image, CSV or any data format.
PDF
Data Files
"Connectors" section shows the available connectors in the system to connect to multiple data sources from incoming source through variety of available data sources. It can connect to DB sources, 3rd party API, VPN tunnel (for secure data transferring), connecting any source to fetch data on schedules without prompting the providers and also through any incoming stream or through incoming queue service.
Connectors
debezium
API
Secure VPN Tunnel
Airflow Management Service
Queue Service
Route filtering will route the source connection to the suitable connectors. It will help the system to be much fast and much secure when connecting the system to the outside sources.
Route Filtering
Notification service will let the system know when the new data is available to fetch.
Notifications Service
SiteWise DataStream
These Services are able to fetch data in the form of data stream as well and it is able to connect to multiple data streams at the same time.
"Ingestion Layer" section contains the services that will get connected to the sources through the connectors and fetch the data from these sources.
Ingestion Layer is able to fetch all kind of data through the high speed connectivity and it is designed intelligently to redirect the coming data to the suitable landing storage. It will also redirect the data to the processing layer for data cleansing. There is a Mapper created in this layer to map data from different sources according to the required output data source.
Ingestion Layer
kafka
api
Apache Airflow
PySpark
Data Mapper
"Data processing Layer" section performs the data cleansing and preprocessing as required that includes fixing and removing incorrect, corrupt, incorrectly formatted duplicates or filling the missing data.
Data Processing Layer
Apache Airflow
PySpark
"Storages" section stores the incoming data in different formats either it is any object file or a structured or unstructured data. It is also able to store the multi-dimensional data as well as the time series data.
Storages
MINIO
Greenplum
"Data Analytics" section helps communicate complex data clearly and intuitively, making recognizing trends, patterns, relationships, and insights easier. Well-designed charts, graphs, maps, and other visual elements allow stakeholders to grasp the results quickly, facilitating meaningful insights and helping drive growth. Some common types include bar charts, line graphs, scatter plots, pie charts, heat maps, histograms, and treemaps. These Data analytics tools are clean, simple, and free from unnecessary decorations. Highlighting the key insights and making the data interactive. Platform Y-Net is our predictive analytics tool that helps analyze patterns and relationships within the data to make informed predictions and anticipate trends, usually based on historical data and statistical modeling techniques. Data-Gas is our customized data analytics tool to provide the descriptive analytics so Businesses might use descriptive analytics to see their performance during specific campaigns or understand their product sales.
Data Analytics
Interactive Visualization
Graph Analytics
Forecasting
Data Preparation
GeoSpatial Analytics
Data Cataloging
AI Chat Assistant
Odyx DataDax
Grafana
Apache Atlas
Odyx yMat
Knowledge Graph
Knowledge Graph
ML Engines
docker
LLM Meta Data
Time
Location
Activity
Object
Action
Person
Env.
Gender
Age
vCalendar
SensorML
MPEG-7
VXML
Sensors
Camera
MIC
docker
3D U-Net Image Segmentation
docker
Generative adversarial network architecture
Random input Vector (Random noise)
Real examples
Discriminator Model
Generator Model
Generator fake Example
Binary classification
Update Model
Real
Fake
Update Model
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Our
Projects

Algo engine - HydroCarbon Engineering

Challenge:

Our client is an independent power producer with focus on delivering electricity products and services for commercial and industrial customers. They were handling a vast amount of real-time data, files stored on external drives, and third-party data using manual data management techniques, which was driving up their costs. Additionally, they needed to ingest real-time data from the energy sector into data lakes for easier access and faster analysis.
Our client is INDUSTRY LEADERS IN COMPOSITIONAL ANALYSIS, MEASUREMENT and PRODUCTION ALLOCATION

Solution:

By leveraging the AWS Cloud Solution we proposed a state of the Art OCR Engine and computer vision engine to extract and catalog text from various types of files such PDF, Raster Images, Personal and Corporate Fine print Documents which provides insights such as hidden information and perform calculations ***engine from*** *invoices, and other critical data.*

Workflow

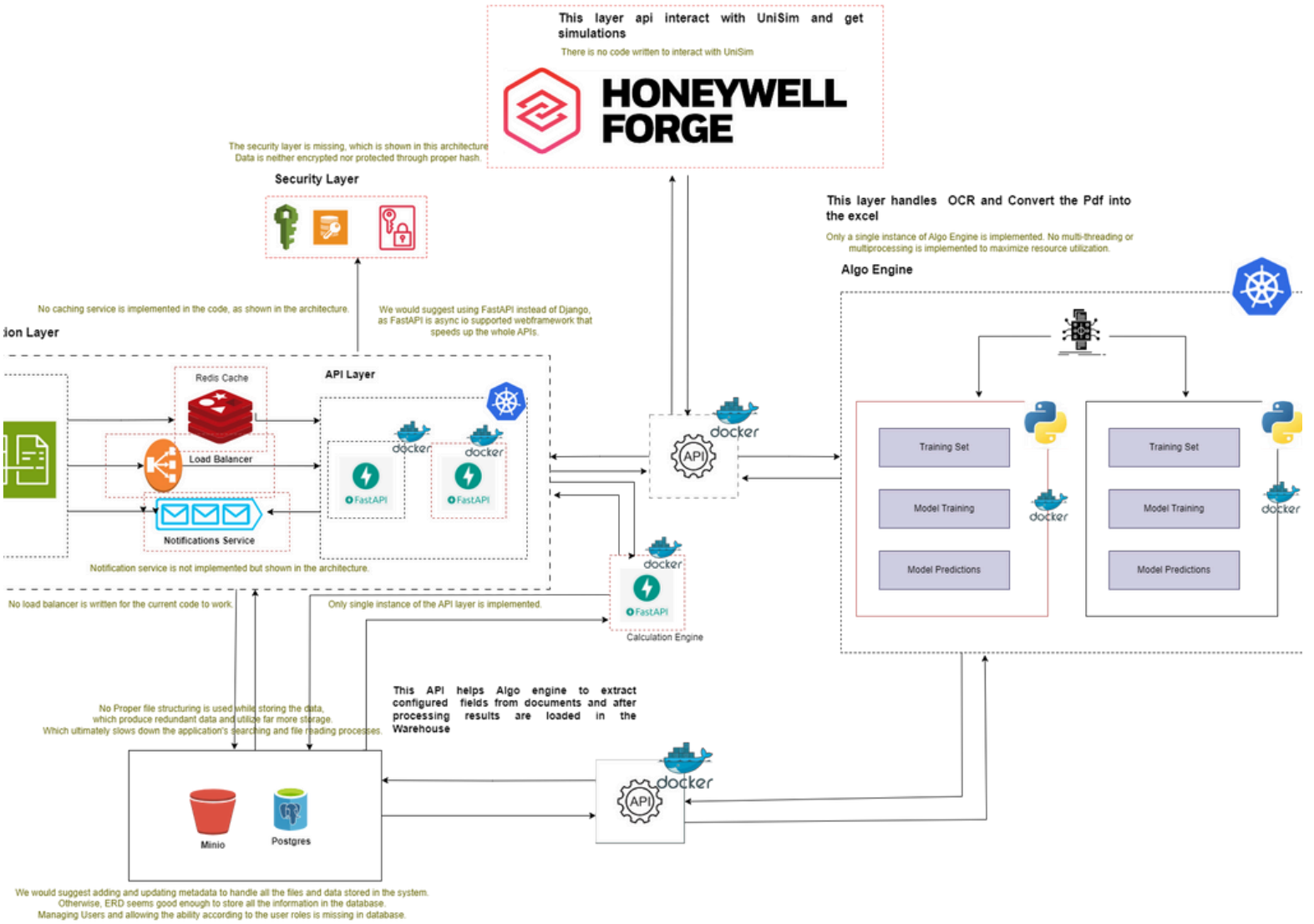
1. *Document Input: Upload PDFs, images, or scanned documents.*
2. *Preprocessing: Enhance image quality and segment the document into regions of interest.*
3. *OCR Processing: Extract text from the segmented regions using the OCR model.*
4. *NLP Analysis: Correct OCR errors, recognize entities, and analyze context.*
5. *Data Structuring: Store the extracted and processed information in a structured format.*

Insights and Retrieval: Provide insights and allow users to search and retrieve specific information.

Tools and Technologies

- *OCR Libraries: Tesseract, Google Cloud Vision, AWS Textract*
- *Image Processing: OpenCV, Scikit-Image.*
- *Deep Learning Frameworks: TensorFlow, PyTorch, Keras.*
- *NLP Libraries: SpaCy, NLTK, Transformers (Hugging Face).*
- *Data Storage: PostgreSQL. MinIO*
- *Annotation Tools: annotated-types*

'ellow lines are comments, and red doted lines show missing / not implemented objects.



Our
Projects

Object Zero Foundation Mobile App

Challenge:

According to recent government data; nearly 20 Veterans and 1 service member commit suicide every day, equating to over 7,000 suicides per year. Despite its best, noble efforts, the US government has struggled to deal with the scope of this problem. For instance, the VA's Suicide Crisis Hotline was embroiled in controversy when reports surfaced that many Veterans were being put on hold or redirected to backup call centers.

Solution:

A nonprofit tech start-up focused on preventing Veteran suicide by fostering social connection and providing access to suicide prevention resources through a mobile app. The app connects Veterans, military members, and their families to a nationwide network of volunteers, counselors, and fellow Veterans. Objective Zero believes that listening can save lives.

https://play.google.com/store/apps/details?id=org.objectivezero.app&hl=en

https://apps.apple.com/us/app/objective-zero/id1304706914

Our
Projects

Nordstrom App

Nordstrom, Inc., is a leading fashion specialty retailer, offering customers one of the most extensive selections of clothing, shoes, and accessories for men, women, and children.

Objective:
Revamp the UI of the mobile app to enhance user experience and increase conversion rates.
Key Focus Areas:

- Streamlined Navigation
- Enhanced Visual Design
- Optimized User Flow
- Personalization
- Improved Accessibility
- Feedback and Iteration

By focusing on these areas, the revamped UI resulted in a more engaging and user-friendly experience, driving higher conversion rates and user satisfaction.

https://play.google.com/store/apps/details?id=com.nordstrom.app&hl=en&pli=1

https://apps.apple.com/us/app/nordstrom/id474349412

Our
Projects

Scraping Engine - Image and Data Scraping for AI Training

Objective

The project aimed to collect a comprehensive dataset of images and associated data from various websites. The primary focus is on obtaining high-quality images for AI training purposes, with a secondary emphasis on capturing relevant metadata related to the images.

Scope

- ***Geographical focus**: Primarily United States and Canada, with international sources as a secondary priority*
- ***Types of images**: Various categories, including but not limited to portraits, landscapes, and object transformations*
- ***Data sources**: Websites featuring image galleries, relevant online resources, and image repositories*

Deliverables Summary:

- *Web Scraper Development:*
- *Developed a web scraper to efficiently extract images and data from targeted websites, with search functionality for identifying relevant pages based on specific categories and keywords.*
- *Image Collection:*
- *Gathered high-quality images, focusing on diverse transformations within each category, and organized them for AI training, preserving their original quality.*
- *Data Extraction:*
- *Extracted and structured metadata linked to the images, using AI techniques for normalization and creating mappings between images and their metadata.*
- *Data Cleaning and Organization:*
- *Conducted basic data cleaning, organized the data for AI training, prioritizing important images and complete metadata.*
- *Documentation and Reporting: Documented the web scraping process and challenges, and provided a report detailing the dataset, including statistics on image count, category distribution, and metadata quality.*

Our
Projects

Breast Cancer Engine AI

Project Overview:

Breast Cancer Engine AI is an advanced artificial intelligence-driven platform designed to assist in the early detection, diagnosis, and treatment planning of breast cancer. By leveraging machine learning algorithms and deep learning techniques, the system aims to enhance the accuracy and efficiency of breast cancer screening, ultimately improving patient outcomes.

Key Features:

- *Advanced Image Analysis: The platform processes mammograms, ultrasounds, and MRI scans using deep learning models trained on extensive datasets. It identifies and classifies abnormalities such as tumors, microcalcifications, and other potential indicators of breast cancer.*
- *Predictive Analytics: Breast Cancer Engine AI provides risk assessment models that predict the likelihood of breast cancer development based on patient data, including genetic, lifestyle, and environmental factors.*
- *Treatment Recommendations: The system offers personalized treatment options by analyzing patient-specific data and matching it with the latest research and clinical guidelines. This includes recommendations for surgical options, chemotherapy, radiation therapy, and targeted therapies.*
- *Real-Time Diagnostics Support: The platform assists radiologists and oncologists by highlighting areas of concern in medical images and suggesting potential diagnoses, reducing the likelihood of human error and improving diagnostic accuracy.*
- *Patient Monitoring: Post-diagnosis, Breast Cancer Engine AI tracks patient progress, analyzing follow-up scans to monitor treatment effectiveness and detect any signs of recurrence early.*
- *Integration with Electronic Health Records (EHR): The system seamlessly integrates with existing EHR systems, ensuring that all patient data is centralized and accessible for comprehensive analysis and decision-making.*

Our
Projects

AI lenz - Smart video analytics

Project Overview:

AI Lenz is an advanced smart video analytics solution designed to harness the power of artificial intelligence and machine learning for real-time video data processing and analysis. The system is engineered to provide accurate, actionable insights from video streams across various industries, including security, retail, transportation, and manufacturing.

Key Features:

- *Real-Time Object Detection: AI Lenz utilizes state-of-the-art object detection algorithms to identify and track objects, such as people, vehicles, and other relevant entities, in live video feeds.*
- *Behavior Analysis: The system can detect unusual or suspicious behavior, enabling proactive responses to potential security threats or operational inefficiencies.*
- *Facial Recognition: Equipped with facial recognition technology, AI Lenz can identify individuals, enabling personalized experiences or enhanced security measures.*
- *Crowd Management: The platform offers crowd density analysis and flow management, crucial for optimizing safety and operational efficiency in public spaces.*
- *Heat Mapping: AI Lenz generates heat maps that visualize areas of high activity, providing insights into customer behavior in retail environments or traffic patterns in transportation hubs.*
- *Automated Alerts: The system sends instant notifications based on predefined criteria, such as unauthorized access, loitering, or equipment malfunctions.*

Our Team

Waqar Ahmad (Viki)

Founder and CEO

With over a decade of experience in cybersecurity and cyber operations, Waqar brings a strategic vision to AI-driven solutions. As a CEO, his unique expertise in securing critical infrastructures and optimizing complex systems underpins his leadership in driving innovation. Waqar's ability to merge deep cyber defense knowledge with advanced AI technologies ensures that his organization delivers cutting-edge solutions that are resilient against evolving threats. His leadership is characterized by a commitment to empowering businesses with innovations that prioritize both security and strategic growth, positioning the company at the forefront of technological advancement.

Dr Irfan Younas

Head of AI & Data Science

Dr. Irfan holds a Ph.D. from KTH - Royal Institute of Technology, Stockholm, Sweden, and brings over 13 years of research experience combined with nearly a decade of extensive industry expertise. His work spans the Design, Development, Implementation, and Management of complex systems across various domains, including Artificial Intelligence, Machine Learning, Data Science, Evolutionary Computation, Evolutionary Machine Learning, Deep Learning, and Optimization.. He has worked on different military and defense-related projects carried out at the Swedish Defence Research Agency (FOI).

Shan e Abbas (Sunny)

Chief Technology Officer

Sunny is a visionary Chief Technology Officer with over a decade of experience in driving technological innovation and delivering scalable, enterprise-level solutions. Renowned for his strategic foresight and technical acumen, he has a proven track record of leading cross-functional teams to success in complex, fast-paced environments. Sunny excels in dynamic settings where aligning technology strategy with business goals is critical, consistently achieving high-impact results. His expertise in fostering collaboration, optimizing development processes, and rapidly mastering emerging technologies has positioned him as a pivotal leader in advancing organizational growth and technological excellence.

Ahmed Javed (AJ)

Engineering Manager

A seasoned Engineering Manager with a robust background in full-stack development and cloud infrastructure, he specializes in designing and implementing high-performance RESTful APIs using Python, Flask, FastAPI, and MongoDB. His expertise extends to leveraging cloud services such as AWS, EC2, CloudWatch, and S3 to optimize and scale applications. He excels in leading cross-functional teams and driving projects from design to deployment, ensuring that engineering efforts are aligned with business objectives and delivered on time.

Our Team

Shahmir Jay

Project Manager

Shahmir is a seasoned technical project manager with a strong background in mobile app development. He has successfully led multiple projects from concept to launch, ensuring they meet high standards of quality and user experience. Shahmir has also demonstrated his entrepreneurial skills by raising funds for his startup, showcasing his ability to secure investment and drive business growth. In addition to his hands-on project management experience, Shahmir has served as an advisor in startup incubators, where he has guided emerging entrepreneurs and helped nurture innovative ideas into viable business ventures.

M Saqib (Saqi)

Python Rockstar

Saqi is a team lead with a strong background in backend development, specializing in Python and Django. His expertise lies in leading teams to build scalable, secure, and efficient SaaS (Software as a Service) solutions. With a deep understanding of backend architecture and cloud-based technologies, Saqi excels at driving the development of robust applications that meet the dynamic needs of modern businesses

Essam Ali

BI Developer

Essam Ali is a data visualization expert with a keen ability to transform complex data into clear, actionable insights. His expertise in creating compelling visual representations allows stakeholders to easily interpret and make data-driven decisions. Essam is skilled in using various visualization tools and techniques to craft intuitive dashboards, charts, and graphs that effectively communicate key metrics and trends. His work enhances the accessibility and impact of data across organizations

Adeeb Mughal

Data Scientist

Mr. Adeeb is a highly skilled Data Scientist with a double master's degree in Mathematics and Statistics. With a decade of experience in Python programming and data engineering, he brings deep analytical expertise to his role. His strong foundation in both theoretical and applied aspects of data science allows him to tackle complex data challenges, delivering valuable insights and driving data-driven decisions

Our Team

Wasif ur Rahman

Senior Software Engineer

Wasif is a Senior Software Engineer with a specialization in machine learning. He is adept at developing and deploying machine learning models, optimizing algorithms, and integrating AI-driven solutions into scalable software systems. His deep understanding of machine learning techniques and software engineering principles allows him to create innovative, data-driven applications that address complex business challenges.

Hasan Mehmood

Quality Assurance Lead

An experienced Quality Assurance (QA) Engineer with 8 years of expertise in both automation and manual testing within software development. Skilled in designing and executing test cases, developing test scripts, and ensuring software quality through rigorous testing processes. Proficient in identifying defects, improving product reliability, and collaborating with development teams to enhance application performance.

Numair Saif

Principle Software Engineer

Mr. Numair is a principle software engineer with extensive expertise in back-end development, data engineering, and business intelligence. He excels in designing robust backend systems, managing and optimizing data pipelines, and providing insightful business intelligence solutions. His ability to bridge the gap between complex data structures and actionable business strategies makes him a key contributor to any technology-driven project.

M Faizan

Senior Product Designer

Faizan is a seasoned Senior Product Designer with extensive expertise in UI/UX design. He excels at creating intuitive and visually compelling user interfaces, bringing ideas to life through thoughtful and user-centric design solutions. His experience and skills ensure that products are not only aesthetically pleasing but also highly functional, enhancing the overall user experience.

Thank You!

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