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TITLE PAGE

- **Problem Statement ID –** 1728
- **Problem Statement Title -** Development of a Paperless Scholarship Disbursement System for PMSSS
- **Theme-** Miscellaneous
- **PS Category- Software**
- **Team ID-**
- **Team Name – (AVENGERS)**

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IDEA TITLE

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An efficient, paperless system for students to securely submit, verify, and track PMSSS scholarship documents online, ensuring fast and transparent disbursement.

Proposed Solution:

- **Streamlined Verification**: Documents are quickly routed to the SAG Bureau for fast, digital verification, speeding up the process.
- **Instant Updates**: Students get real-time notifications on their submission status, ensuring transparency.
- **Paperless Process**: Digital verification reduces time, prevents lost documents, and eliminates the need for physical copies.
- **Seamless Payment**: Verified documents move automatically to the Finance Bureau for quick payment.
- **Data Privacy**: The system ensures student data is secure, following strict privacy standards.

How It Addresses the Problem:

- **Reduces Processing Time:** Eliminates time-consuming paperwork by enabling digital document submission and automated workflows.
- **Transparency**: Real-time tracking keeps students informed at every stage of the process, enhancing transparency.

Innovation and Uniqueness of the Solution:

- **Smart Verify AI**: Automatically checks documents for authenticity and clarity, flagging any issues.
- **Time Track AI**: Estimates scholarship processing times based on data from previous applications.
- **Adaptive Workflow Engine:**Ensures real-time document processing and seamless updates across all stages.

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TECHNICAL APPROACH

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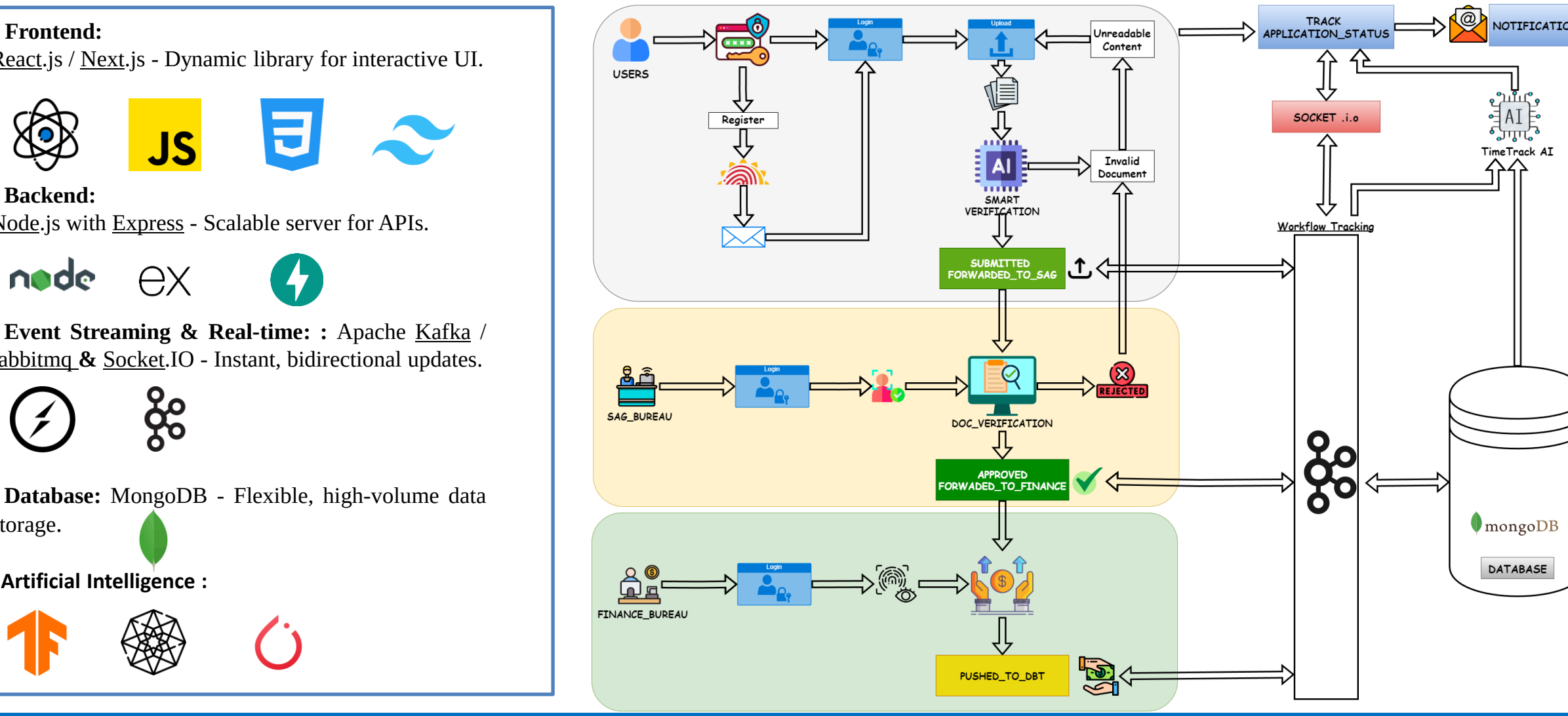
• **Frontend:**
React.js / Next.js - Dynamic library for interactive UI.

• **Backend:**
Node.js with Express - Scalable server for APIs.

• **Event Streaming & Real-time: :** Apache Kafka / rabbitmq **&** Socket.IO - Instant, bidirectional updates.

• **Database:** MongoDB - Flexible, high-volume data storage.

Artificial Intelligence :



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FEASIBILITY AND VIABILITY

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- **Tech Fit**: React, Node.js & Kafka are reliable for real-time updates and scaling.
- **Cost-Effective**: Using open-source and cloud tools keeps costs down.

CHALLENGES :

Data Security
•**Risk**: Protecting sensitive data.
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System Scalability
•**Risk**: Handling high user traffic.

Real-time Updates
•**Risk**: Keeping data current.

SOLUTIONS :

- Use JWT tokens and encryption; conduct security audits.

- Use scalable cloud services and optimize database performance.

- Use Socket.IO for instant, real-time notifications.

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IMPACT AND BENEFITS

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Impacts:

- **For students**: quicker disbursement, enhanced convenience, real-time tracking.
- **For SAG Bureau**: efficiency, reduce errors, and allows to focus on quality verification and policy-making.
- **For finance bureau**: Automation speeds payments and ensures transparency and accountability.

Benefits:

- **Reduced paperwork**: minimizes errors and document misplacement.
- **Real-time tracking**: gives transparency to students over their scholarship status.
- **Secure data handling**: protects personal information of the students.
- **Faster scholarship processing**: benefit students by reducing waiting time.

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RESEARCH AND REFERENCES

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- Details / Links of the reference and research work