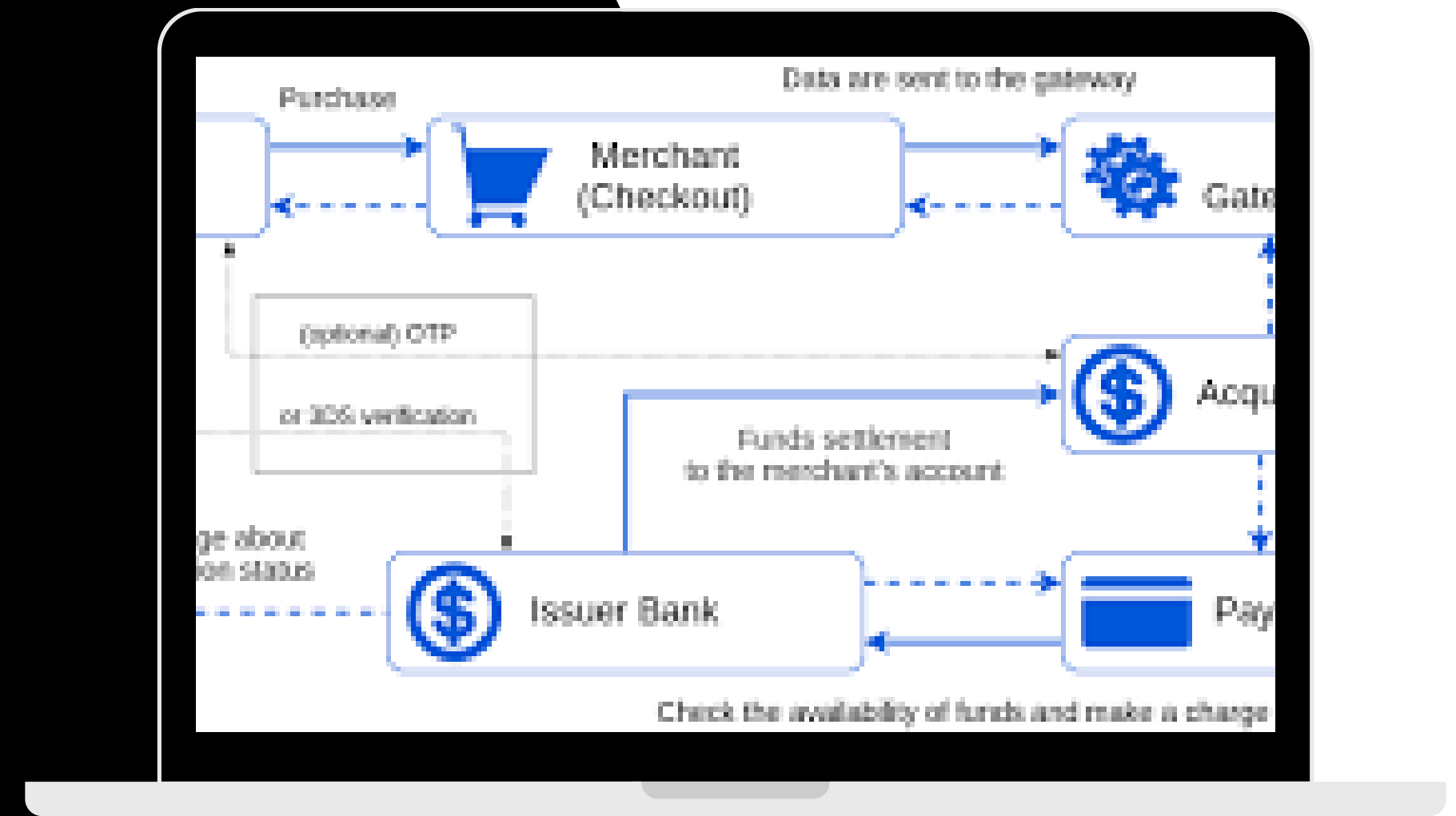


# Payment Engine

**TATA 1mg**



**Dr. Javed Imran**  
Assistant Professor  
(Faculty mentor)

**Gaurav Jain**  
SDE1 TATA 1MG  
(Industrial mentor)

**Paras Bakshi**  
Intern TATA 1MG  
Team Payments  
101917118

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# About TATA 1MG

- Tata 1MG is a leading healthcare and pharmaceutical company in India.
- TATA 1MG offers a wide range of services including online consultation with doctors, ordering medicines, diagnostic tests, and health products.
- It was founded in 2015 and currently has over 40 million monthly active users.

# Problem Statement

- Tata 1 Mg's Payment service operates within the Vyked , which is connected to a PostgreSQL databases.
- This framework was specifically designed by Tata 1 Mg to manage payment services.
- The operations within this framework are based on Synchronous as well as Asynchronous programming.
- With time cause a bottleneck in the application's performance and scalability, particularly in situations where multiple requests are made concurrently.

# Payment Engine

- Payment Engine is an Asynchronous version of the existing Payment service at TATA IMG.
- Project Payment Engine is based on Sanic, which is an asynchronous programming framework.
- Payment Engine integrates with Tortoise ORM, which is an object-relational mapper that makes it easier to interact with a database in an object-oriented way.
- Payment Engine project has a more efficient and scalable architecture, allowing it to handle more requests and respond more quickly to user interactions.

# Objectives

- Convert Payment service from Vyked to Asynchronous Sanic Framework.
- Improved Performance and Increased Scalability.
- Simplified Development and Maintenance
- Improved Workflow for Business Logic
- Refactored and Modular Codebase
- Better Alerting/Monitoring/CI/CD/Logging

# Role & Contribution

- Development of Juspay, Paytm, UPI and card routes.
- Development of Mock service
- Development of Amazonpay and User Config routes.
- Performed API testing
- Successfully completed the Quality Assurance
- Handled Payment-related on-calls

# Techniques and Tools used

- Git
- Linux
- Python (Asyncio, Pydantic)
- Sanic Framework
- PostgreSQL
- MongoDB
- Pytest for Testing API's
- Devtron
- Bitbucket Pipelines





# Snapshots of Project

**Credit & Debit Cards**  
Add New Card For Payment

Card Number  
XXXX XXXX XXXX XXXX

Expiry Date (MM/YY)      Security code  
MM / YY      CVV

Name on card

☒ Your card details will be saved securely for future transactions, based on the industry standards.

**MAKE PAYMENT**

Backend routes for Save Card and Delete Card.

Item Total(MRP) ₹1230.2

Price Discount -₹66.2

Shipping Fee FREE for Members ₹0

**To be paid ₹1164**

Total Savings ₹66.2

**PROCEED TO PAYMENT**

The process of Payment start from Call to Payment Init Route

**UPI**  
transfer money from your bank account using your UPI app

We accept BHIM, Google Pay, PhonePe, Paytm

**Saved UPI ID**

Pay via new UPI ID

paras@2001oksbi

The UPI ID is in the format of name/phone number@bankname

☒ Securely save this VPA for faster checkout next time

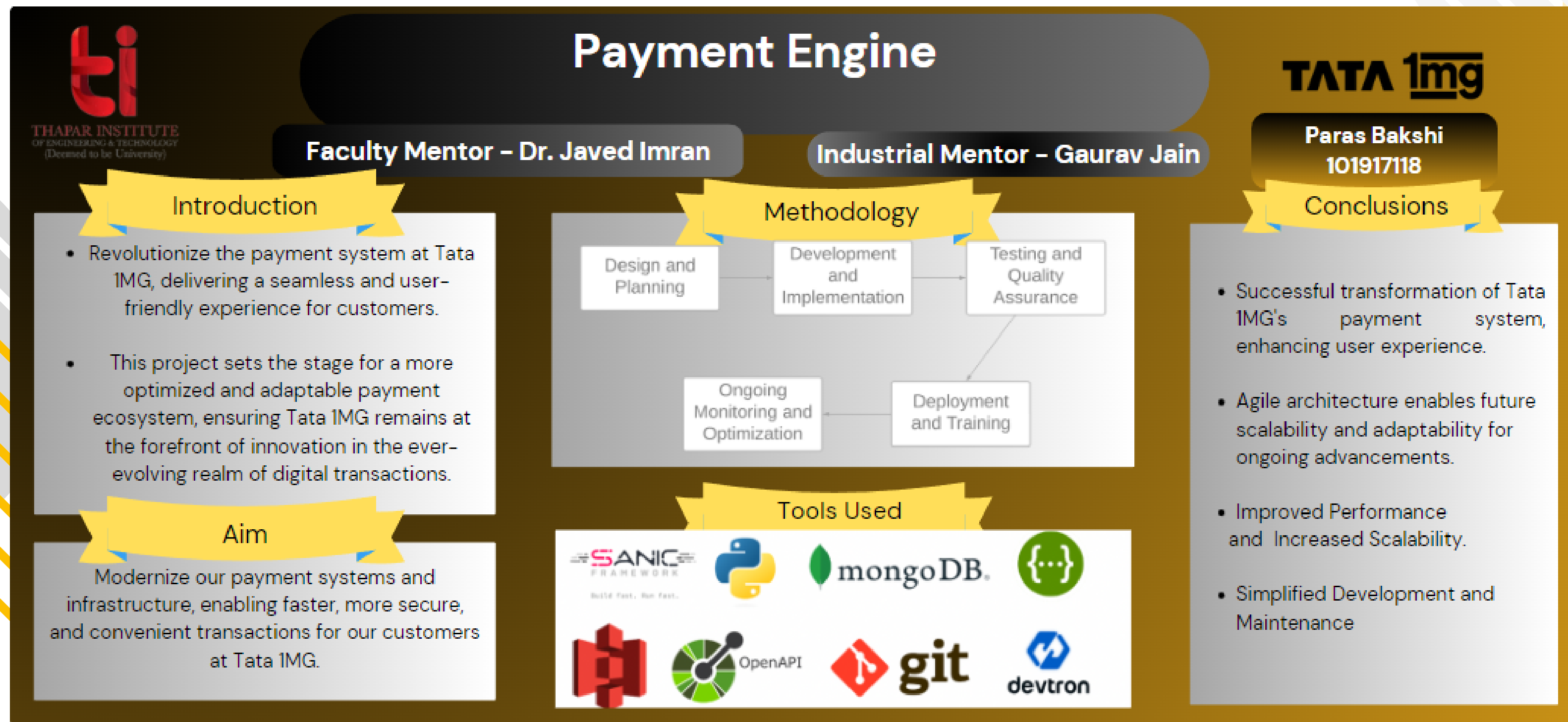
**VERIFY & PAY**

Backend routes for Adding and Validating UPI

# Professional and Technical Learning

- Acquired hands-on industry experience.
- Acquired a broad range of technological knowledge.
- Ideal Launchpad for a Software Development Career.
- Growth of Soft Skills through Collaborative Interactions.

# Poster





# Thank You