



Industrial Training Presentation

Fiuu (Razer Merchant Services)

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FACULTY SUPERVISOR: DR. JUMAIL BIN TALIBA

ORGANIZATION SUPERVISOR: MR. JEREMY HENG

MS. MARDHIAH NAJWA

Company Overview



Fintech company specializing in online and offline payment solutions.



Connects international brands with regional consumers.



Partnership with Razer Inc in 2018, the world's leading lifestyle brand for gamers and a high-performing software and hardware provider.

2005

Founded

300

Employees

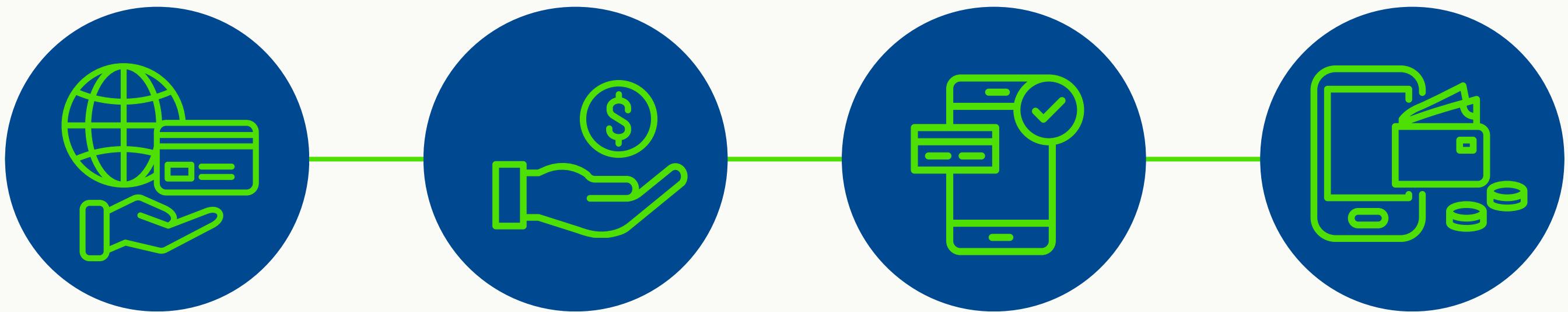
60k

Merchants

6

Regional Offices

Fiuu Services



Payment Gateway

Secure processing for
online businesses

Fiuu Cash

Cash payments at 7-
Eleven stores

Virtual Terminals

All-in-one payment
processor in a form of a
mobile app

E-Wallets

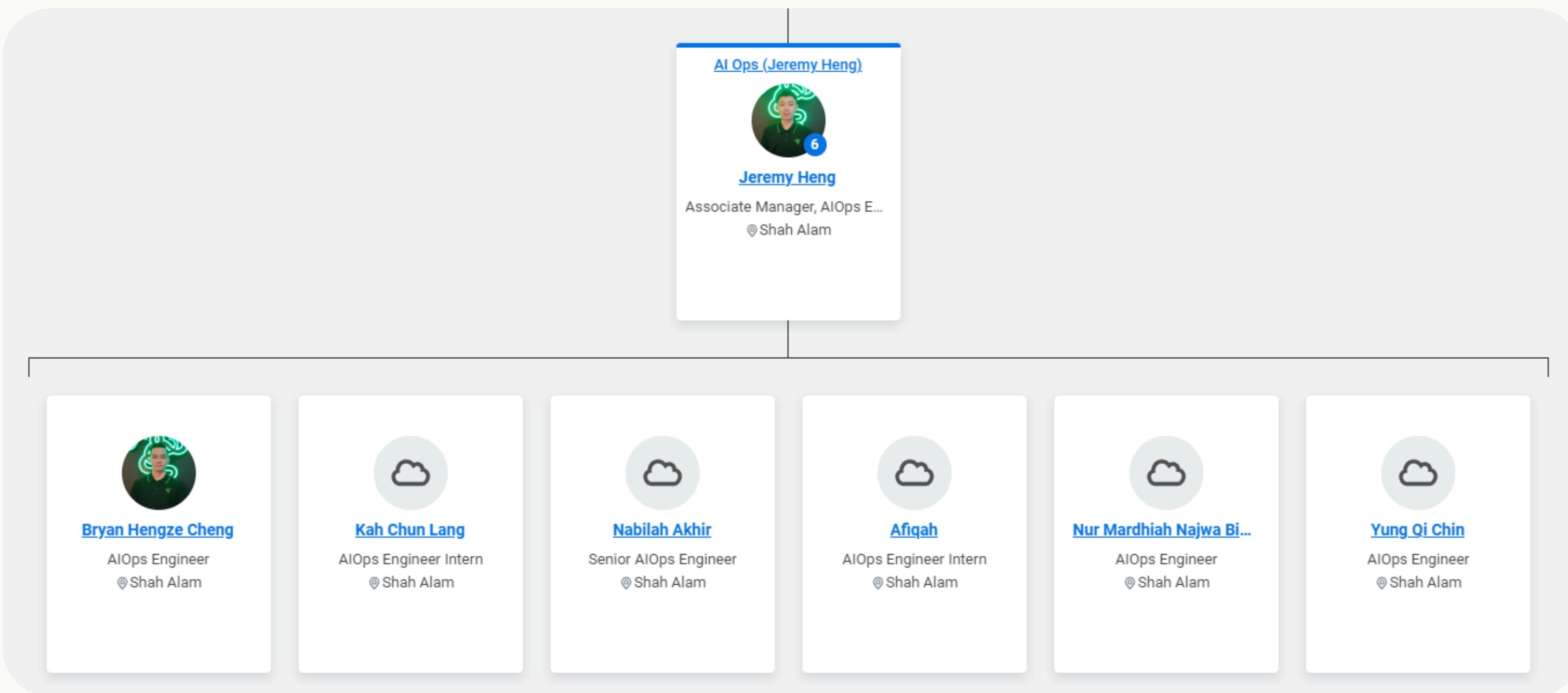
Integration with major
digital wallets like Alipay
and Touch 'n Go.

Clientele



AIOps Team

This unit is responsible for leveraging artificial intelligence and machine learning technologies to enhance IT operations (AIOps)



Training Program

Overview



Program Goals

- Develop technical expertise in automation, data processing, and system development.
- Enhance problem-solving skills by working on real-world fintech challenges.
- Foster collaboration and communication within cross-functional teams.

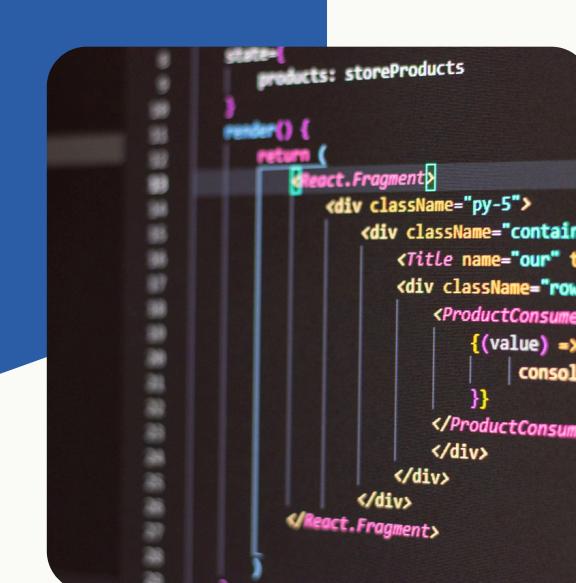
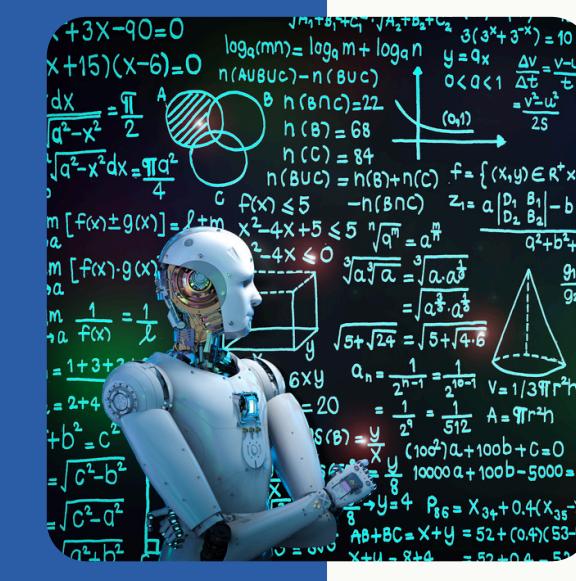
Key Roles

- **AIOps Engineer Intern:** Supporting the Technology Department in automating operations and analyzing data.
- **Mentorship:** Guided by Mr. Jeremy Heng and senior engineers to ensure skill development and project alignment.

Methodologies Used

- **Agile Practices:** Iterative task planning and execution with regular feedback loops.

Task and Responsibilities



Automation

- Automated repetitive tasks and reducing manual workload.
- Streamlining workflows to improve efficiency and accuracy.

DataOps

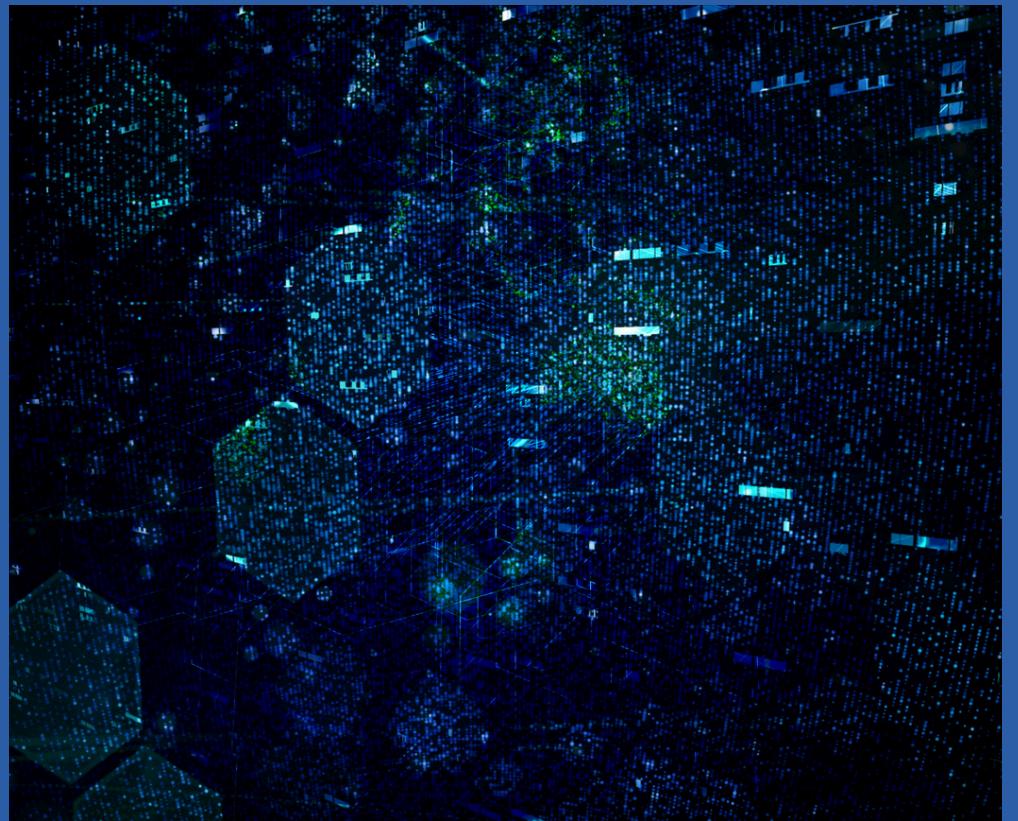
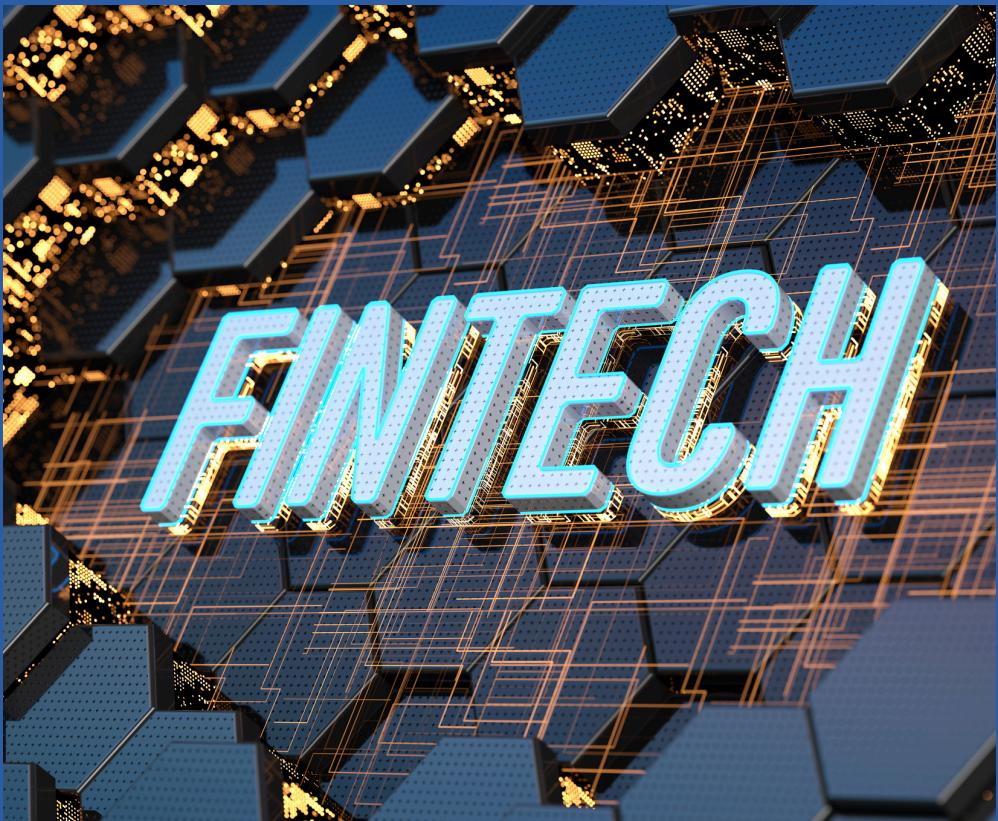
- Gathering raw data from multiple sources for analysis.
- Cleaning, transforming, and validating data to ensure quality.
- Analyzing datasets to identify trends, insights, and actionable outcomes.

Web Development

- Enhancing organization website
- Improving user interfaces and functionalities for better usability.

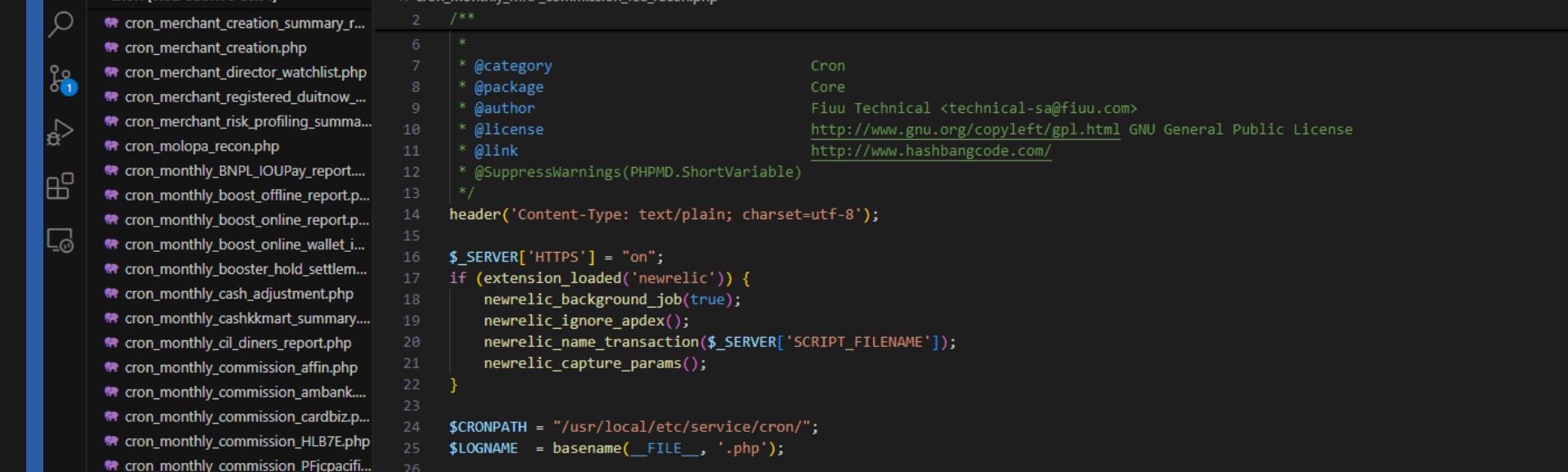
Automation (RPA)

- Bank Negara Malaysia Payment Card Reform Framework Monthly (PCRF-M) Report Generation
- BNM (PCRF-M) Terminal MPOS Report Generation
- AMEX Project - Implementation of New Specifications for Merchant onboarding file requirement "S/E Demographics File"
- MRP Monthly Commission Fees Reconciliation



Automation (RPA)





```
 2  /**
 3  *
 4  * @category Cron
 5  * @package Core
 6  * @author Fiuu Technical <technical-sa@fiuu.com>
 7  * @license http://www.gnu.org/copyleft/gpl.html GNU General Public License
 8  * @link http://www.hashbangcode.com/
 9  * @SuppressWarnings(PHPMD.ShortVariable)
10  */
11
12 header('Content-Type: text/plain; charset=utf-8');
13
14
15
16 $_SERVER['HTTPS'] = "on";
17 if (extension_loaded('newrelic')) {
18     newrelic_background_job(true);
19     newrelic_ignore_apdex();
20     newrelic_name_transaction($_SERVER['SCRIPT_FILENAME']);
21     newrelic_capture_params();
22 }
23
24 $CRONPATH = "/usr/local/etc/service/cron/";
25 $LOGNAME = basename(__FILE__, '.php');
26
27 // Import modules
28 require_once $CRONPATH."includes/func_utilities.php";
29 require_once $CRONPATH."includes/couchdb_name.inc";
```

Card Brand	Type of Merchant	TPV (RM)	MDR	Transaction Count
Visa	Professional and commercial services			
Visa	Accommodation and Hotel			
Visa	Retail			
Visa	Professional and commercial services			
Visa	Amusement and entertainment			
Visa	Other type of merchant			
Visa	Amusement and entertainment			
Visa	Financial service			
MyDebit	Amusement and entertainment			
MyDebit	Accommodation and Hotel			
MyDebit	Professional and commercial services			
MyDebit	Retail			
Visa	Financial service			
MyDebit	Other type of merchant			
Mastercard	Other type of merchant			
Visa	Accommodation and Hotel			

Transaction Type	Card Type	Card Brand	Type of Merchant	TPV (RM)	Transaction Count
1 - Local Cardholders in MY	Credit Card	Mastercard	Amusement and entertainment	322.00	1
1 - Local Cardholders in MY	Debit Card	Visa	Other type of merchant	771.00	3
1 - Local Cardholders in MY	Debit Card	Visa	Accommodation and Hotel	1,547.00	3
1 - Local Cardholders in MY	Debit Card	Visa	Professional and Commercial Services	174.00	1
1 - Local Cardholders in MY	Debit Card	Mastercard	Amusement and entertainment	270.00	4
1 - Local Cardholders in MY	Debit Card	Mastercard	Other type of merchant	1,494.00	2
1 - Local Cardholders in MY	Credit Card	Visa	Professional and Commercial Services	16,205.20	125
1 - Local Cardholders in MY	Credit Card	Mastercard	Other type of merchant	799.00	4
1 - Local Cardholders in MY	Debit Card	Visa	Financial service	1,817.00	1
1 - Local Cardholders in MY	Credit Card	Mastercard	Professional and Commercial Services	8,385.87	164
1 - Local Cardholders in MY	Credit Card	Visa	Accommodation and Hotel	12,488.00	33
1 - Local Cardholders in MY	Debit Card	Mastercard	Financial service	2,400.00	4
1 - Local Cardholders in MY	Credit Card	Mastercard	Accommodation and Hotel	1,467.00	23
1 - Local Cardholders in MY	Debit Card	Mastercard	Professional and Commercial Services	3,097.62	64
1 - Local Cardholders in MY	Debit Card	Mastercard	Accommodation and Hotel	8,414.00	20
1 - Local Cardholders Abroad	Credit Card	Mastercard	Other type of merchant	92.00	5
1 - Local Cardholders Abroad	Credit Card	Visa	Other type of merchant	17,146.77	24
1 - Local Cardholders Abroad	Debit Card	Mastercard	Other type of merchant	1,180.00	23
Total records processed: 18					

Web Development

Sales Person In Charge Management for Admin Portal Enhancement

01

Sales PIC Setting Page

02

Enhancing Sales PIC Dropdown

03

Data Insertion and Validation

Web Development

Sales PIC Management
Streamlined Sales PIC Management enabling teams with effortless control over SalesPIC settings. By simplifying control over personnel, the page enhances operational flexibility and ensures proper management of sales PIC.

Sales PIC Records

No.	Action	SalesPIC	History	Creation Date
1	View	Op_Farah	2024-08-05 13:12:01 - (op_cron) Change status from captured to s...	2024-09-25 15:27:16
2	View	Op_Bella	2024-08-01 00:00:00 - (N)km deduction mode : rate value = 0.00...	2024-09-25 17:34:51
3	View	Op_Aida	2024-10-23 09:33:09 - afiqah.intern@fiuu.com deleted sales PIC...	2024-09-26 14:06:54
4	View	Op_Chong	2024-10-23 09:33:00 - afiqah.intern@fiuu.com deleted sales PIC...	2024-09-30 10:13:42
5	View	Op_Aidan	2024-10-16 09:02:12 - afiqah.intern@fiuu.com deleted sales PIC ...	2024-10-01 11:54:21
6	View	Op_Alis	2024-10-16 09:01:54 - afiqah.intern@fiuu.com created sales PIC 2...	2024-10-16 09:01:54
7	View	Op_Lee	2024-10-18 17:54:19 - afiqah.intern@fiuu.com created sales PIC...	2024-10-18 17:54:19

Showing 1 to 7 of 7 results

[Add SalesPIC](#)

[Download SalesPIC Table](#)

Sales PIC Management
Streamlined Sales PIC Management enabling teams with effortless control over SalesPIC settings. By simplifying control over personnel, the page enhances operational flexibility and ensures proper management of sales PIC.

Sales PIC Records

No.	Action	SalesPIC	Creation Date
1	View	Op_Farah	2024-09-25 15:27:16
2	View	Op_Bella	2024-09-25 17:34:51
3	View	Op_Aida	2024-09-26 14:06:54
4	View	Op_Chong	2024-09-26 14:12:33
5	View	Op_Aidan	2024-09-26 14:13:42
6	View	Sales PIC A	2024-10-16 11:12:30 - afiqah.intern@fiuu.com deleted sales pic 2...
7	View	Afiqah	2024-10-16 16:20:39 - afiqah.intern@fiuu.com created sales PIC 2...
8	View	ali	2024-10-17 15:26:19 - afiqah.intern@fiuu.com created sales PIC...
9	View	op_epp	2024-10-17 17:31:01 - afiqah.intern@fiuu.com created sales PIC...

Showing 1 to 9 of 9 results

[Delete SalesPIC](#)

[Add SalesPIC](#)

[Download SalesPIC Table](#)

[afiqah.intern@fiuu.com](#) [Change Password](#) [Logout](#)

Sales PIC

Nb_linahassan

Tag

Search Sales PIC...

TPA Merchant

Afiqah

Afiqah Izzati

Nb_linahassan

FPX Seller ID with ORF Feature

MSIC-CODE

Display CCA Option at Hosted Page

Sales PIC Records

id	userID	sales_PIC	created_at	updated_at	history	status
609			2024-11-12 18:03:29	2024-11-12 18:03:29		1
610			2024-11-12 18:03:29	2024-11-12 18:03:29		1
611			2024-11-12 18:03:29	2024-11-12 18:03:29		1
612			2024-11-12 18:03:29	2024-11-12 18:03:29		1
613			2024-11-12 18:03:29	2024-11-12 18:03:29		1
614			2024-11-12 18:03:29	2024-11-12 18:03:29		1
615			2024-11-12 18:03:29	2024-11-12 18:03:29		1
616			2024-11-12 18:03:29	2024-11-12 18:03:29		1
617			2024-11-12 18:03:29	2024-11-12 18:03:29		1
618			2024-11-12 18:03:29	2024-11-12 18:03:29		1
619			2024-11-12 18:03:29	2024-11-12 18:03:29		1
620			2024-11-12 18:03:29	2024-11-12 18:03:29		1

DataOps

Retrieving Token Data
and Merchant
Inactivity Analysis for
Business Department

Top 5 payment app
by ranking scanned
DuitnowQR for Lazada

Success Rate Data
Pulling and Analysis
for merchant
luckincoffeeesg

Merchant Sampling
Data List Generation
for KPMG Auditors

Merchant List for
Email Blast, targeting
XDK merchants using
Google Pay

Latest list of
merchant information
with e-invoice profile
information.

[Data Request] [E-Invoice] Latest list of merchant information with e-invoice profile information. As of 17-10-2024

Edit

Open Issue created 2 months ago by [\[REDACTED\]](#)

Additional DATA to add

1. ROC no.

Condition :

1. MID last settlement date.
2. MID last transaction date.
3. Merchant Portal Last Login date.
4. Limit merchant list to region = RMS MY.
5. Please include parent information.

merchantID	Parent	CompanyName	TradingName	Email	Office	Sales PO	Category	MerchantType	CompanyType	AccountS	BankID	Acco
1		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
2		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
3		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	2	active			
4		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
5		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
6		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
7		ABC Corp	ABC Corp	abc@abc.com	1	1	Professional Services	2	active			
8		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	6	active			
9		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
10		ABC Corp	ABC Corp	abc@abc.com	1	1	Retail / Store	5	active			
11		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
12		ABC Corp	ABC Corp	abc@abc.com	1	1	Sports	2	active			
13		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	6	active			
14		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
15		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	2	active			
16		ABC Corp	ABC Corp	abc@abc.com	1	1	Retail / Store	2	active			
17		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
18		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
19		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
20		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	2	active			
21		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
22		ABC Corp	ABC Corp	abc@abc.com	1	1	Food & Beverage	2	active			
23		ABC Corp	ABC Corp	abc@abc.com	1	1	Retail / Store	2	active			
24		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
25		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
26		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			
27		ABC Corp	ABC Corp	abc@abc.com	1	1	Retail / Store	2	active			
28		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
29		ABC Corp	ABC Corp	abc@abc.com	1	1	Automobiles and vehicles	2	active			
30		ABC Corp	ABC Corp	abc@abc.com	1	1	Personal Services	6	active			

DataOps

Get Last Transaction Date from op1 trx_report

```
[ ]: engine = read3_engine()

for index, row in profile.iterrows():
    # query
    sqlInput = """/*OK TO KILL*/
        SELECT date
        FROM
        WHERE merchantID= :merchantID AND status IN ('settled', 'captured') AND date >= '2024-01-01'
        ORDER BY date DESC
        LIMIT 1
        """
    params={'merchantID': row['merchantID']}
    stmt = text(sqlInput).bindparams(**params)
    final_sql = stmt.compile(compile_kwargs={"literal_binds": True})
    last_create_date = pd.read_sql_query(sql=final_sql, con=engine.connect())

    if len(last_create_date) <= 0:
        profile.loc[index, 'Last Transaction Date'] = 'NA'
    else:
        profile.loc[index, 'Last Transaction Date'] = last_create_date.loc[0, 'date']

    if (index + 1) % 100 == 0:
        print(index)
```

Merchant Sampling Data List

Open Issue created 3 weeks ago by Anne

Request: Please help to generate an Excel file that lists our merchants along with the payment channels they are using for the year of 2024.

This is needed for the KPMG auditors, who will be conducting tests on all payment channels. Their process involves:

1. Randomly selecting merchants.
2. Making purchases via the merchants' websites.
3. Asking us to retrieve the corresponding transaction IDs from our system and settlement reports.

To facilitate this, the Excel should include the following details:

1. Merchant Name
2. Merchant ID
3. Domain
4. Enabled Payment Channels (e.g., Credit card, FPX, MyDebit, eWallet, etc.)
5. Date Onboarded

Merchant Name	Merchant ID	Domain	Enabled Payment Channels	Date Onboarded
ABC Corp	1	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	2	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	3	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	4	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	5	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	6	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	7	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	8	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	9	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	10	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	11	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	12	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	13	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	14	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	15	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	16	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	17	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	18	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	19	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	20	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	21	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	22	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	23	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	24	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	25	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	26	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	27	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	28	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	29	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01
ABC Corp	30	abc.com	Credit card, FPX, MyDebit, eWallet	2024-01-01

Name	Last Modified
data sampling - channel gr...	13 days ago
einvoice	8 days ago
luckincoffeesg	a month ago
mobileXDK + GooglePay	11 days ago
token count	8 days ago
zuspresso	13 days ago

File Edit View Run Kernel Tabs Settings Help



einvoice_latest.ipynb



```
[6]: import pandas as pd
import os
import logging
from dotenv import load_dotenv
from urllib.parse import quote_plus
from sqlalchemy import create_engine, text
import datetime
from datetime import datetime, timedelta
from urllib.parse import quote
import time
from sqlalchemy.exc import SQLAlchemyError
```

Load env

```
[7]: with open('/etc/environment', 'r') as f:
    for line in f:
        name, value = line.strip().split('=', 1)
        value = value.replace("'", "")
        os.environ[name] = value

# read3
READ3_IP = os.getenv('READ3_IP')
READ3_USER = os.getenv('READ3_USER')
READ3_PASSWORD = os.getenv('READ3_PASSWORD')
```

Gitlab Profile

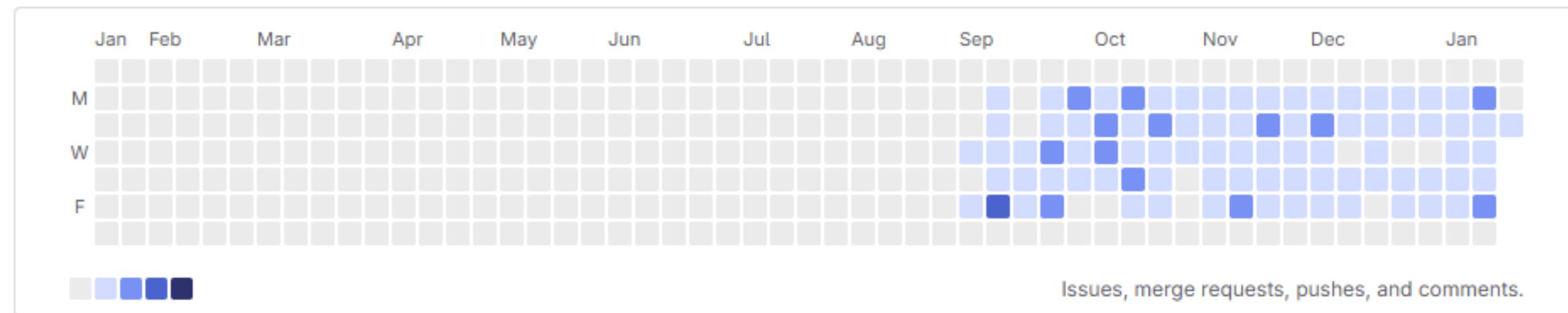


Afiqah Izzati binti Azzerol Effendi
@afiqah.intern

[Edit profile](#)

⋮

Activity



Info

Member since September 02, 2024

Contact

live:.cid.78623f37854fd730

Skills Gained



Technical Skills

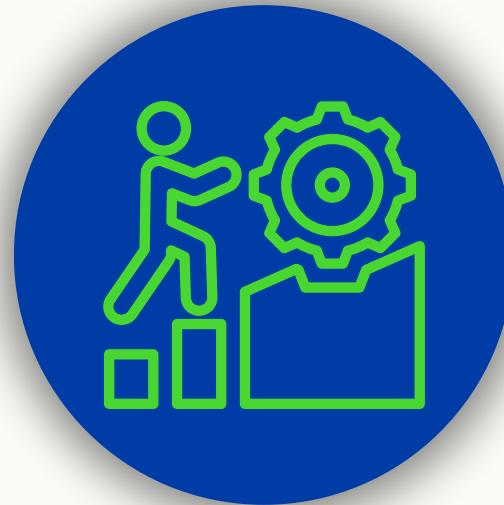
- **CI/CD Pipeline:** Hands-on experience in setting up and managing CI/CD pipelines using GitLab for efficient software deployment.
- **Automation:** Developing scripts to streamline operational processes.
- **Data Handling:** Proficient in data extraction, processing, and analysis.



Soft Skills

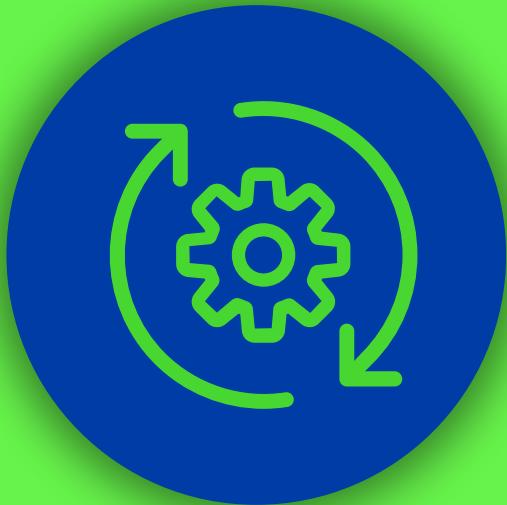
- Problem-solving and critical thinking.
- Effective communication and teamwork.
- Adaptability to a fast-paced environment.

Challenges and Solutions



Challenges

- Adapting to new tools (e.g., Docker, PHP for automation).
- Understanding complex database structures.
- Debugging and optimizing scripts for large datasets.



Solutions

- Followed comprehensive documentation and conducted hands-on practice with mentorship support.
- Explored database schemas using visualization tools like entity-relationship diagrams.
- Used logging and iterative testing, ensuring efficient data processing.

Conclusion

- The internship provided hands-on experience in automation, data processing, and web development.
- Strengthened both technical and soft skills for future career growth.
- Gained valuable insights into the fintech industry's operations and challenges.





Thank You

For Your Attention