

#### **INTERNSHIP REPORT FORMAT**

# STUDENT INTERNSHIP PROGRAM (SIP) Semester Long Internship Program (SLIP) REPORT

Impactility Pvt. Ltd.

**Submitted By** 

Niranjan Girhe

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0120190587



#### SCHOOL OF COMPUTER ENGINEERING AND TECHNOLOGY

# MIT ACADEMY OF ENGINEERING ALANDI (D), PUNE

# **CERTIFICATE**

This is to certify that the "Student Internship Program (SIP)" report submitted by Niranjan Dadasaheb Girhe PRN 0120190587 is work done by him and is submitted during 2022-23 academic year.

**Faculty Mentor** 

**School - Internship Coordinator** 

Mrs. Madhavi Nimkar

Mrs. Diptee Ghusse

**Coordinator - SIP** 

**School Dean** 

Mr. Krunal Pawar

Dr. Rajeshwari M Goudar





29/05/2023

#### TO WHOMESOEVER IT MAY CONCERN

This is to certify that Mr. Niranjan Girhe(IMP008) is bonafide intern cum employee of Impactility Private Limited since 1<sup>st</sup> January 2023 till date. He is working as a Full Stack Software Engineer – Intern at Pune office.

His internship duration at Impactility Private Limited is from 1<sup>st</sup> January 2023 to 31<sup>st</sup> May 2023. Upon completion of internship Mr. Niranjan Girhe would become a Full-Time staff of Impactility Private limited.

This certificate is issued on specific request from employee for academic purpose without any risk and liability on the company and the undersigned.

Sincerely,

Nitin Gavhans

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# **ACKNOWLEDGEMENT**

I have taken efforts in this internship. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them.

I am highly indebted to Abhishek and Sachin for their guidance and constant supervision as well as for providing necessary information regarding the internship & also for their support in completing the internship.

We want to express our gratitude towards our respected SIP guide Mrs. Madhavi Nimkar ma'am for her constant encouragement and valuable guidance during the completion of this internship. We also want to express our gratitude towards respected School Dean Dr. Rajeshwari M Goudar ma'am for her continuous encouragement.

I would like to express my gratitude towards my parents & member of Impactility Pvt. Ltd. for their kind co-operation and encouragement which help me in completion of this internship.

My thanks and appreciations also go to my peers in the internship and people who have willingly helped me out with their abilities.

Niranjan Girhe



# **Table of Contents**

		Topic	Page No.
1.	Introduction		
	1.1	About Organization	6
	1.2	Internship Duration	6
	1.3	Work Completed during Internship	7
2.	Internship Discussion		15
	2.1	Final Output	20
3.	Conclusi	Conclusion	
4	Bibliogra	Bibliography	



#### 1. Introduction

#### 1.1. About Organization

Impactility is a passion-driven cleantech company that leverages emerging technologies to generate measurable sustainability impact. They provide both individuals and organizations with the tools they need to bring traceability, verification and quantification to their sustainability initiatives and thus become part of a new and circular economy. Their cutting-edge technology enables positive social, environmental and economical sustainability impact, without any compromises. They are accelerating tomorrow's sustainability impact today.

Impactility's mission is to make sustainability accessible and impactful for everyone. They believe that everyone has a role to play in creating a more sustainable future, and they are committed to providing the tools and resources that people need to make a difference.

Impactility's vision is to be the leading provider of sustainability solutions. They want to be the go-to company for individuals and organizations that are looking to make a positive impact on the planet.

#### 1.2. Internship Duration:

5 Months (2<sup>nd</sup> January 2023 to 28<sup>th</sup> May 2023)



#### 1.3. Work Completed during Internship

During my internship, I had the opportunity to work on a diverse range of tasks and projects, contributing to various aspects of application development, web development, and blockchain technologies.

One of my primary responsibilities was building an Android application. I gained handson experience in Android development, working on different features and functionalities of the application. This involved designing user interfaces, implementing interactive elements, and ensuring smooth functionality across different devices and screen sizes. In addition to application development, I also had the opportunity to manage publication keys for the Android application. This involved securely storing and managing the keys to ensure the integrity and security of the application during the publishing process.

Furthermore, I was responsible for setting up the Google Play Console, which involved configuring various settings, managing application versions, and monitoring the performance and user feedback of the published application. To expand the reach of the Android application, I explored and implemented deep linking using Firebase deep links. This allowed users to seamlessly navigate to specific content within the application through shared links or URLs.

In collaboration with the front-end team, I contributed to several tasks related to the front-end development of the Android application. This included implementing UI enhancements, optimizing performance, and resolving any issues or bugs that arose during testing. Transitioning to web development, I had the opportunity to work on a web application where I focused on theme building. I gained knowledge and expertise in creating visually appealing and responsive themes that enhanced the overall user experience of the web application.

In addition to theme building, I contributed to various front-end tasks within the web application, implementing new features, improving existing functionalities, and ensuring cross-browser compatibility. To gain a deeper understanding of blockchain technologies, I had the opportunity to work on AWS architecture setup and testing. This involved



configuring the necessary infrastructure, deploying blockchain nodes, and conducting comprehensive testing to ensure the reliability and scalability of the architecture.

Furthermore, I delved into iOS app testing and troubleshooting, specifically focusing on a React Native app. I identified and resolved front-end bugs, ensuring that the app provided a seamless user experience across different iOS devices. Expanding my blockchain knowledge, I engaged in learning about web3, blockchain concepts, and smart contracts. This involved understanding the underlying principles of blockchain technology, exploring decentralized applications, and gaining proficiency in developing and deploying smart contracts.

I further honed my skills by learning Ethereum JS and web3 JS, key frameworks for building decentralized applications. This allowed me to implement a web3 application, leveraging the capabilities of the Ethereum network and interacting with smart contracts. In my quest to expand my blockchain expertise, I familiarized myself with Hard Hat, a development environment for Ethereum. Through this, I gained proficiency in developing, testing, and deploying blockchain projects, contributing to the successful implementation of a Hard Hat project.

Additionally, I explored document signing using private keys, understanding the cryptographic principles behind it. Leveraging this knowledge, I successfully implemented a document signing feature, ensuring the authenticity and integrity of signed documents. Account abstraction in a blockchain wallet was another concept I learned during my internship. By leveraging the Stackup framework, I implemented account abstraction, enhancing the security and usability of the blockchain wallet.

In the realm of decentralized identity, I delved into Verifiable Credentials (VC) and Distributed Identity (DID). I learned about the concepts, standards, and protocols governing these technologies, understanding their potential for secure and privacy-preserving digital identities. To apply my newfound knowledge, I implemented Polygon ID, a decentralized identity solution based on the Polygon network. This involved designing and developing the necessary infrastructure, integrating with existing systems, and ensuring the seamless functioning of the identity solution.



Furthermore, I successfully implemented Polygon Issuer Node, leveraging the capabilities of the Polygon network to issue and manage digital assets securely and efficiently. Throughout my internship, I was consistently engaged in a continuous learning process, exploring various technologies, frameworks, and concepts. This included gaining a deeper understanding of the blockchain ecosystem, learning about different blockchain networks, and exploring the potential applications and benefits of decentralized technologies.

In addition to technical tasks, I actively participated in team meetings and discussions, collaborating with colleagues and sharing knowledge and insights. This allowed me to enhance my communication and teamwork skills, as well as learn from the experiences and perspectives of others in the team. Moreover, I had the opportunity to work on real-world projects and contribute to their successful implementation. This not only provided me with practical experience but also allowed me to witness the impact of my work and the value it brought to the organization.

Throughout my internship, I demonstrated a strong work ethic, attention to detail, and a proactive approach to problem-solving. I was able to effectively manage my time and prioritize tasks to ensure timely delivery of projects and meet the expectations set by the team. Furthermore, I actively sought feedback from my mentors and colleagues, utilizing their guidance and constructive criticism to improve my skills and enhance the quality of my work. This allowed me to continuously grow and develop both personally and professionally.

In conclusion, my internship experience encompassed a wide range of tasks and projects, spanning Android application development, web development, and blockchain technologies. I successfully contributed to the implementation of various features, resolved issues, and gained valuable insights into the practical application of these technologies. I am confident that the skills and knowledge I have acquired during this internship will be valuable assets as I move forward in my career in the technology industry.



#### Work done Bi-weekly:

#### **Biweekly Period 1:**

- Built an Android application: During this period, I focused on developing an Android application. I worked on coding and implementing various features and functionalities, ensuring the app's functionality and usability.
- Managed publication keys for the app: I was responsible for managing the publication keys required for publishing the Android application. This involved securely handling and configuring the keys to ensure proper app distribution.

#### **Biweekly Period 2:**

- Set up the Google Play console: I established the Google Play console, a platform for managing and distributing Android applications. I configured settings, created app listings, and made necessary preparations for the publication process.
- Established a developer account: I created and set up a developer account, granting me access to valuable resources and tools for Android app development.
   This account enabled me to utilize developer-specific features and services.
- Published the Android application on the Google Play Store: This period culminated in successfully publishing the Android application on the Google Play Store. I followed the necessary guidelines and procedures to make the app available for users to download and install.

#### **Biweekly Period 3:**

Implemented deeplinking using Firebase deep links in the Android app: I integrated
deeplinking functionality into the Android application using Firebase deep links.
This allowed users to navigate directly to specific content within the app, improving
the user experience and engagement.



 Worked on front-end tasks in the Android application: I focused on various frontend tasks, such as designing UI elements, optimizing layouts, and improving user interactions. These efforts aimed to enhance the visual appeal, responsiveness, and overall usability of the Android app.

#### **Biweekly Period 4:**

- Developed and customized themes for a web application: During this period, I
  dedicated my efforts to developing and customizing themes for a web application.
  I focused on creating visually appealing and consistent styles, layouts, and color
  schemes, aligning them with the application's branding and user experience goals.
- Completed front-end tasks in the web application: I worked on front-end tasks in the web application, implementing user interface components, improving user experience, and optimizing performance. I aimed to create an intuitive and userfriendly interface while ensuring the application's responsiveness and functionality.

#### **Biweekly Period 5:**

- Set up AWS architecture for an application: In this period, I focused on setting up
  the necessary infrastructure and architecture for an application using Amazon Web
  Services (AWS). I configured and deployed various services, designed the
  architecture for scalability and security, and ensured a robust environment for the
  application's operation.
- Conducted testing of the AWS architecture: I dedicated this period to testing and
  quality assurance activities to validate the functionality, performance, and reliability
  of the AWS architecture. This involved conducting various tests, including
  functional testing, performance testing, and security testing, to ensure that the
  architecture met the desired standards and requirements.



#### **Biweekly Period 6:**

- Tested an iOS app: During this period, I focused on thoroughly testing an iOS app.
   I conducted comprehensive testing to identify any bugs, issues, or inconsistencies in the app's functionality and user experience. I aimed to ensure that the app worked seamlessly on iOS devices.
- Fixed front-end bugs in a React Native app for iOS: I addressed and resolved frontend bugs specific to the iOS version of a React Native app. This involved debugging and troubleshooting to improve the app's visual appearance, functionality, and user interface on iOS devices.

#### **Biweekly Period 7:**

Worked on front-end tasks in the iOS app: During this period, I continued to focus
on front-end tasks in the iOS app. This included implementing user interface
components, optimizing layouts, and enhancing the overall visual design elements
to create a polished and user-friendly app experience for iOS users.

#### **Biweekly Period 8:**

- Learned blockchain concepts: In this period, I dedicated time to learning about fundamental blockchain concepts. This included understanding distributed ledger systems, consensus algorithms, and the importance of data integrity in the context of blockchain technology.
- Explored smart contracts: I delved into the concept of smart contracts during this
  period. I learned about their role in automating and executing agreements on the
  blockchain, enabling trustless and tamper-resistant transactions and interactions.



- Implemented smart contracts on a blockchain platform: I applied my knowledge of smart contracts by developing and deploying them on a blockchain platform. This involved writing contract code, testing its functionality, and ensuring proper integration with the blockchain ecosystem.
- Acquired knowledge of Ethereum JS and Web3 JS: I dedicated time to learning about Ethereum JavaScript (Ethereum JS) and Web3 JavaScript (Web3 JS).
   These are essential tools for interacting with the Ethereum blockchain and developing decentralized applications. I gained proficiency in using these libraries for various Ethereum-related tasks.

#### **Biweekly Period 9:**

- Learned and utilized Hard Hat for Ethereum smart contract development: During this period, I focused on learning and utilizing Hard Hat. Hard Hat is a development environment and testing framework specifically designed for Ethereum smart contract development. I explored its features and capabilities, such as local blockchain deployment, contract compilation, and testing utilities.
- Explored document signing using private keys: I delved into the process of document signing using private keys during this period. This involved understanding cryptographic techniques and protocols to sign digital documents, ensuring their authenticity, integrity, and non-repudiation.
- Implemented document signing functionality: I applied my knowledge of document signing using private keys to develop document signing functionality. This involved generating and verifying digital signatures, ensuring the security and integrity of signed documents.
- Explored account abstraction in blockchain wallets using Stackup: I dedicated time
  to understanding account abstraction, a concept in blockchain wallets that allows
  for flexible and modular account management. I explored Stackup, a library or
  framework that facilitates the development of blockchain wallets and related
  functionalities, simplifying the implementation of account management features.



#### **Biweekly Period 10:**

- Learned about Verifiable Credentials (VC) and Distributed Identity (DID): In this
  period, I focused on learning about Verifiable Credentials and Distributed Identity.
  Verifiable Credentials are a standardized format for digitally representing and
  sharing credentials or qualifications, enabling secure and tamper-proof verification.
  Distributed Identity is a method of managing and verifying digital identities in a
  decentralized manner using blockchain technology.
- Explored Polygon ID: I dedicated time to understanding Polygon ID, a
  decentralized identity solution built on the Polygon blockchain. I explored its
  features, capabilities, and integration possibilities, understanding how it enhances
  security and privacy in decentralized applications.
- Implemented Polygon ID functionality: During this period, I applied my knowledge
  of Polygon ID to implement its functionality in a project. This involved integrating
  Polygon ID into a decentralized application, utilizing its identity verification
  capabilities, and exploring its features and functionalities.
- Implemented a Polygon issuer node for digital asset management: I developed and deployed a Polygon issuer node, which facilitated the issuance and management of digital assets or tokens on the Polygon blockchain. This involved creating and managing digital assets, ensuring their integrity and security within the blockchain network.



# 2. Internship discussion

During my internship at Impactility, I had the privilege of being part of a passionate cleantech company that is dedicated to generating measurable sustainability impact. Impactility leverages emerging technologies to make sustainability accessible and impactful for everyone, with the ultimate goal of creating a more sustainable future.

Throughout my internship, I was involved in a wide range of projects and tasks that allowed me to contribute to Impactility's mission. On the software development side, I had the opportunity to work on Android application building, managing publication keys, and setting up the Google Play Console and developer accounts. I even had the chance to publish an Android application, which was a fulfilling experience.

In addition to Android development, I also worked on front-end tasks for both the Android and web applications, focusing on improving user interfaces and enhancing the overall user experience. This gave me valuable insights into creating intuitive and visually appealing interfaces.

On the blockchain side, I delved into the world of decentralized technologies. I learned about blockchain concepts, smart contracts, and Ethereum development. This knowledge enabled me to implement smart contracts, interact with the Ethereum blockchain using libraries such as Ethereum JS and Web3.js, and explore the capabilities of Hardhat.

Furthermore, I had the opportunity to expand my knowledge in areas such as document signing using private keys and account abstraction in blockchain wallets. These experiences allowed me to understand the practical applications of blockchain technology beyond just development.

Throughout my internship, Impactility demonstrated its commitment to sustainability and its dedication to making a positive impact. The company's values, including passion, innovation, collaboration, and transparency, resonated with me as I witnessed firsthand how these principles were ingrained in the work we did.



Beyond their technological endeavors, Impactility provides a range of products and services to support sustainability initiatives. These include sustainability tracking and reporting tools, consulting services to help individuals and organizations develop and implement sustainability initiatives, and educational resources to promote sustainability awareness and action.

Overall, my internship at Impactility was an enriching experience that allowed me to contribute to the company's mission of making sustainability accessible and impactful for everyone. I gained valuable skills, knowledge, and insights into the intersection of technology and sustainability, and I am grateful to have been part of a team that is dedicated to accelerating tomorrow's sustainability impact today.

#### My Learning at Impactility:

Android Application Development: Over the course of my internship, I gained extensive hands-on experience in building Android applications. I had the opportunity to work on various features, improve functionality, and enhance the overall user experience. This involved collaborating with the development team, utilizing best practices, and leveraging frameworks and libraries to create robust and user-friendly applications.

Agile Development Methodology: Impactility embraced an agile development approach, and I learned how to effectively collaborate in this environment. I participated in sprint planning sessions, daily stand-ups, and retrospective meetings. Working with tools like Jira, I gained insights into task management, prioritization, and efficient team coordination. This experience enhanced my ability to adapt to changing project requirements and deliver results in a fast-paced environment.

Mobile App Testing: Testing played a crucial role in ensuring the quality and reliability of the mobile applications. I had the opportunity to contribute to the testing process by designing test cases, performing functional and regression testing, and reporting bugs and issues. This hands-on experience provided me with valuable insights into different testing strategies and techniques specific to mobile applications.



Cross-Platform Development: During my internship, I had exposure to both Android and iOS application development. This cross-platform experience allowed me to gain insights into the similarities and differences between the two platforms. I learned how to leverage shared code and resources, adapt the user interface for different devices, and address platform-specific considerations. This knowledge broadened my skill set and made me more versatile as a developer.

Web Application Development: In addition to mobile app development, I had the opportunity to work on web application development tasks. This involved working on the frontend, implementing new features, and refining user interfaces to ensure an intuitive and visually appealing experience. I gained knowledge of web development technologies, including HTML, CSS, and JavaScript, and learned how to integrate frontend components with backend services.

AWS Cloud Architecture: As part of my internship, I delved into the realm of cloud computing by learning and implementing AWS architecture. I acquired knowledge on setting up and configuring services such as EC2, S3, and RDS to deploy and manage applications. Understanding the principles of scalability, availability, and security in the cloud environment was an important aspect of this learning experience.

Blockchain Technology: Impactility's focus on sustainability and emerging technologies led me to explore the fundamentals of blockchain. I gained a solid understanding of blockchain concepts, including distributed ledger technology, smart contracts, and decentralized applications (DApps). This knowledge allowed me to appreciate the potential of blockchain technology and its role in creating transparent and secure systems.

Web3 Integration: In line with blockchain technology, I delved deeper into Web3 integration. I learned about Web3.js, a JavaScript library that allows interaction with Ethereum and other blockchain networks. Through practical exercises, I acquired the skills to integrate Web3.js functionalities into applications, such as interacting with smart contracts, managing wallets, and accessing decentralized data.



Documentation and Digital Signatures: Another aspect of my internship involved learning about the importance of documentation and digital signatures for authentication and integrity purposes. I gained insights into different cryptographic techniques and explored frameworks for implementing document signing functionality. This knowledge enabled me to enhance the security and authenticity of digital documents within applications.

Sustainability Principles: Throughout my internship at Impactility, I gained a deeper understanding of sustainability principles and their application in technology-driven solutions. I learned about traceability, quantification, and verification of sustainability initiatives, aligning with Impactility's mission to make sustainability accessible and impactful. This holistic perspective allowed me to contribute to projects with a focus on creating positive environmental and societal impacts.

#### **Helpful College Courses:**

**Cross-Platform Development:** 

- "The Complete React Native + Hooks Course" by Udemy
- "Complete React Native in 2023: Zero to Mastery (with Hooks)" by Udemy

#### Web Application Development:

- "The Complete 2023 Web Development Bootcamp (React JS)" by Udemy
- "React The Complete Guide (incl Hooks, React Router, Redux)" by Udacity

#### AWS Cloud Architecture:

- "Architecting on AWS" by Amazon Web Services Training and Certification
- "AWS Certified Solutions Architect Associate" by A Cloud Guru

#### Blockchain Technology:

- "Blockchain Basics" by Coursera
- "Ethereum and Solidity: The Complete Developer's Guide" by Udemy

#### Web3 Integration:



- "Decentralized Applications (DApps): Blockchain Certification" by Udemy
- "Building Ethereum DApps with Solidity and React" by Coursera

#### **Soft Skills learned:**

- Communication Skills: Throughout my internship, I had numerous opportunities to enhance my communication skills. Collaborating with team members and stakeholders allowed me to improve my verbal and written communication abilities, active listening skills, and the clarity with which I convey complex ideas and technical concepts.
- Problem-Solving and Critical Thinking: The challenges I encountered during my internship provided valuable opportunities for problem-solving and critical thinking.
   I learned to think analytically, evaluate situations from different angles, and develop innovative solutions to overcome obstacles.
- Time Management: Balancing multiple tasks and meeting deadlines during my internship required effective time management. I became adept at prioritizing tasks, organizing my workflow, and ensuring efficient progress toward project milestones.
- Adaptability: Working in a dynamic environment like software development demanded adaptability. I quickly learned to embrace change, stay open to new technologies and frameworks, and adjust my approach to align with evolving project requirements.
- Teamwork and Collaboration: Collaborating with colleagues and contributing
  effectively as part of a team was essential in my internship. I honed my teamwork
  skills, including sharing ideas, giving and receiving feedback, and leveraging the
  strengths of team members to achieve our shared goals.
- Attention to Detail: Paying attention to detail is crucial in software development and other technical fields. Throughout my internship, I improved my ability to identify and rectify errors, ensure code quality, and maintain precision in my work.
- Professionalism and Work Ethic: My internship allowed me to further develop my professionalism and work ethic. By demonstrating reliability, meeting deadlines,



taking ownership of tasks, and maintaining a positive attitude, I strengthened these qualities.

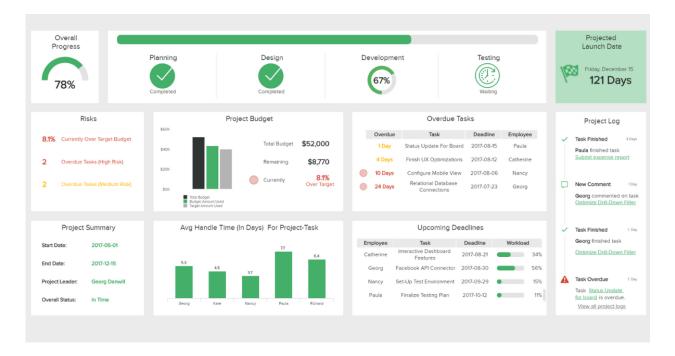
- Proactive Learning: I embraced a proactive approach to learning during my internship. I eagerly sought out new knowledge and skills, took the initiative to explore beyond assigned tasks, and demonstrated a strong desire to continually grow and improve.
- These soft skills, combined with my technical abilities, have made me a more wellrounded and effective professional. I recognize the importance of continuously developing and refining these skills as they will undoubtedly contribute to my future career success.

#### 2.1. Final Output

Error handling



#### Dashboard

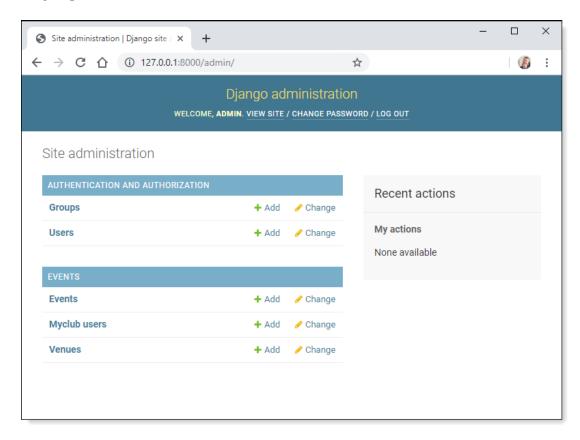


#### Generalizing URL

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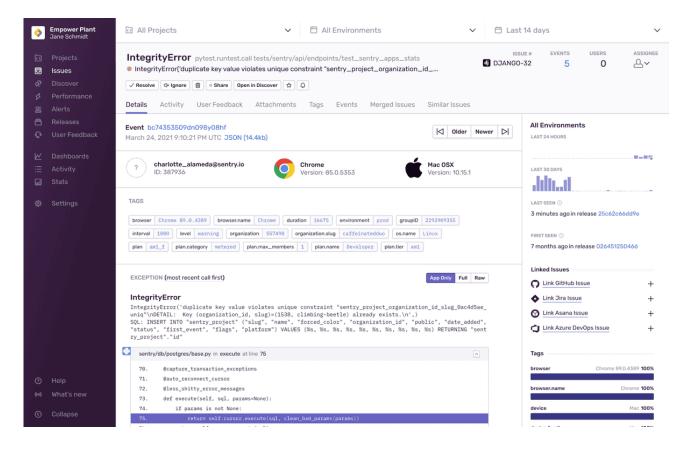


### • Django Admin Panel





#### Sentry Error example

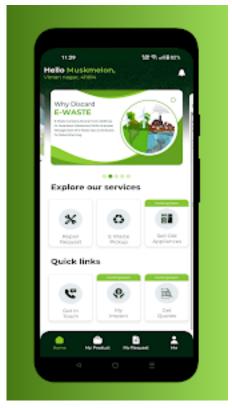


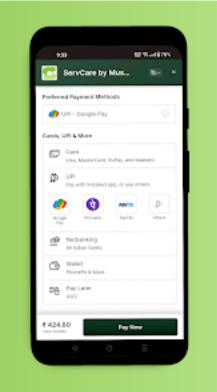
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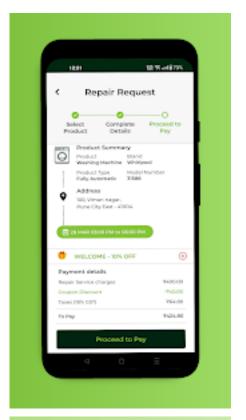
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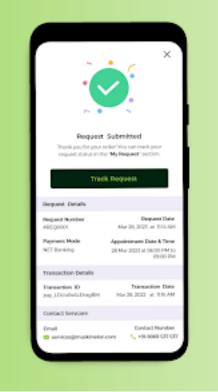


#### Servcare app











#### 3. Conclusion

In conclusion, my internship at Impactility has been an enriching and transformative experience. Through the various tasks and projects I undertook, I gained valuable technical skills and knowledge in areas such as Android application development, web development, blockchain technology, and AWS cloud architecture. The hands-on experience allowed me to apply theoretical concepts to real-world scenarios, enhancing my understanding and proficiency in these domains.

Moreover, this internship provided me with opportunities to develop essential soft skills that are highly valued in the professional world. I further honed my communication skills, problem-solving abilities, time management, adaptability, and teamwork through collaborative projects and interactions with team members and stakeholders. These soft skills will undoubtedly contribute to my effectiveness and success in future endeavors.

Furthermore, working at Impactility allowed me to align my passion for sustainability with technology-driven solutions. Learning about sustainability principles and how technology can be leveraged to create positive environmental and societal impacts has been inspiring and eye-opening. It has reinforced my belief in the importance of sustainable practices and motivated me to continue exploring innovative ways to contribute to a more sustainable future.

I am grateful to the entire team at Impactility for their guidance, support, and mentorship throughout my internship. Their expertise, dedication, and commitment to sustainability have been instrumental in shaping my professional growth. I am particularly appreciative of the organization's mission to make sustainability accessible and impactful for everyone, as it has instilled in me a sense of purpose and responsibility to contribute to positive change.

Overall, this internship has not only expanded my technical skill set but has also fostered personal and professional development. I am confident that the knowledge, experiences, and skills I have gained during this internship will serve as a strong foundation for my



future career aspirations. I am excited to continue my journey in the field of technology, with a renewed commitment to sustainability and a deep appreciation for the transformative power of emerging technologies.

I extend my sincere gratitude to Impactility for providing me with this invaluable internship opportunity and for their dedication to creating measurable sustainability impact. It has been an honor to be a part of Impactility's mission, and I look forward to contributing to a more sustainable future in my future endeavors.

## 4. Bibliography

- [1] Android Developer Documentation: <a href="https://developer.android.com/docs/">https://developer.android.com/docs/</a>
- [2] Android API Guides: <a href="https://developer.android.com/guide">https://developer.android.com/guide</a>
- [3] AWS Documentation: <a href="https://docs.aws.amazon.com/">https://docs.aws.amazon.com/</a>
- [4] AWS Architecture Center: <a href="https://aws.amazon.com/architecture/">https://aws.amazon.com/architecture/</a>
- [5] Ethereum Documentation: <a href="https://ethereum.org/developers/documentation/">https://ethereum.org/developers/documentation/</a>
- [6] Solidity Documentation: <a href="https://docs.soliditylang.org/">https://docs.soliditylang.org/</a>
- [7] Web3.js Documentation: <a href="https://web3js.readthedocs.io/">https://web3js.readthedocs.io/</a>
- [8] MDN Web Docs: <a href="https://developer.mozilla.org/en-US/docs/Web">https://developer.mozilla.org/en-US/docs/Web</a>
- [9] W3Schools: <a href="https://www.w3schools.com/">https://www.w3schools.com/</a>
- [10] React Native Documentation: https://reactnative.dev/docs
- [11] Expo Documentation: <a href="https://docs.expo.io/">https://docs.expo.io/</a>
- [12] Flutter Documentation: <a href="https://flutter.dev/docs">https://flutter.dev/docs</a>
- [13] Dart Documentation: <a href="https://dart.dev/guides">https://dart.dev/guides</a>
- [14] Agile Alliance: https://www.agilealliance.org/
- [15] Scrum.org: <a href="https://www.scrum.org/resources/what-is-scrum">https://www.scrum.org/resources/what-is-scrum</a>
- [16] Android Testing Documentation: <a href="https://developer.android.com/training/testing/">https://developer.android.com/training/testing/</a>
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- [18] Ethereum Developer Documentation: <a href="https://ethereum.org/developers/">https://ethereum.org/developers/</a>
- [19] AWS Certification Documentation: <a href="https://aws.amazon.com/certification/">https://aws.amazon.com/certification/</a>