

BiniWorld YEARBOOK 2024

January 6, 2025

“Innovations for Future World” is
our motto & sky's our limit!



A Big Thank You!

BiniWorld Innovations Private Limited is a DPIIT-recognized budding Indian start-up company incorporated on 6th January, 2022 and is celebrating its 3rd anniversary now. BiniWorld aims to provide “Innovations for Future World!” by “Powering the World with the Unique concoction of Cryptography and IoT with Blockchain...”

During this anniversary, we take this opportunity to thank all our well-wishers, mentors, advisors, supporters, prospective clients and customers from the bottom of our heart. As a bootstrapped 3 year old startup, we have faced a lot of struggles, and during those times, you have encouraged us to move forward and helped us to be where we are now. We expect your support for you always, and we will fulfill your expectations.

A very big thank you to the BiniWorld team; Dr. Anasuya Threse Innocent, Mr. Aloysius Innocent, Dr. Bala Murugan M S, Mr. Kamlesh Nagware, Mr. Shiju Babu, Mr. Gopal Soni, Ms. Sunitha, and to all the well-wishers and supporters .

This yearbook pens down the achievements of the year 2024 for BiniWorld!

Founders

Dr. A. Anasuya Threse Innocent

Dr. Anasuya Threse Innocent is the Founder and Director of BiniWorld Innovations Private Limited, a budding startup with the motto “Innovations for Future World!”. She is a hardcore academician, passionate about teaching, holding around 20 years of teaching and research experience with reputed private universities in India, inclusive of VIT University, Vellore. She did her PhD in Computer Science and Engineering on Secure Computation Protocol Optimization and developed a secure Blockchain framework. She is also an alumina of Noorul Islam Center for Higher Education (then, the Noorul Islam College of Engineering, Kumaracoil), IIIT-B, Amrita Vishwa Vidyapeetham University, and KBA. Her areas of



interest and skills include theoretical analysis of cryptographic protocols, design and optimization of new protocols, security analysis and multiparty computation with blockchain applications, IoT with blockchain for green and clean application development. She has published more than 20 papers in international and national journals and conferences, and also published books. She is the recipient of “Young Researcher Award 2023”, speaker on international forums, and is also an active member of LF Decentralized Trust (Hyperledger Foundation).

She aims to break the barrier between industry and academia by acting as the bridge between them. She does it by providing a number of internships for students and fresh professionals through BiniWorld Innovations Pvt Ltd. Also, to develop programming skills and to nurture the students from a very young age, BiniWorld has a separate wing called ANU's Academy dedicated to teaching and learning. BiniWorld concentrates on green and clean energy - sustainable and scalable product development with trust and tamper proof security. BiniWorld is one of the top 100 startups selected in TGS100, the TiE Global Summit 2024. Overall, Anasuya is the pivot of BiniWorld, which innovate, educate, implement, and help to achieve a clean and green environment for the future world; as its motto – “Innovations for Future World!”

LinkedIn: <https://www.linkedin.com/in/anasuyathrese/>

Mr. A. Aloysius Innocent



Mr. Aloysius Innocent is the Co-Founder and Director of BiniWorld Innovations Private Limited, a budding startup with the motto “Innovations for Future World!”. He is a hardcore academician, passionate about teaching, holding around 50+ years of teaching experience. He is known as the Best Biology Teacher in Kanyakumari District, Tamil Nadu. He has acted as a ladder in creating many eminent doctors and rank holders from Kanyakumari District. Of his rich teaching experience, he served as a PG Assistant teaching Biology for 10th to 12th students in Carmel Higher Secondary School, Nagercoil for more than 30 years. He also worked in Alphonsa Matriculation School, Nagercoil after his retirement preparing students for entrance exams for more than 11 years. He has also served as guest teacher in many schools of Kanyakumari District teaching students, and training teachers on the Science subjects. Also, he served as the Vice-President of

Annai Velankanni College, Tholayavattam. He is always the pillar of his family, and he blesses and supports BiniWorld wholeheartedly and encourages the young minds to be technically sound and effectively use the opportunities.

About BiniWorld

Who We Are:

- A forward-thinking company leveraging IoT, AI, and blockchain to revolutionize renewable energy adoption and incentivize sustainability

What Drives Us:

- **Combatting Climate Change:** Addressing the global challenge with innovative, user-centric solutions.
- **Monetizing Solar Contributions:** Empowering rooftop solar panel users to gain financial rewards through carbon credits.
- **Bridging Gaps:** Tackling the lack of accessible incentives for renewable energy adoption.
- **Driving Sustainability:** Creating a transparent, inclusive ecosystem for energy producers and corporations.

Our Vision:

To revolutionize sustainability and renewable energy adoption by developing innovative, transparent, and inclusive technology solutions that empower individuals and businesses to create a cleaner, greener, and more equitable future for generations to come.

Our Mission:

To integrate cutting-edge technologies like IoT, AI, and blockchain into scalable solutions that optimize energy efficiency, democratize access to carbon credit markets, and promote financial inclusion. BiniWorld is committed to driving renewable energy adoption, fostering sustainability, and creating impactful change for individuals, businesses, and communities worldwide.

Introduction:

BiniWorld Innovations Private Limited is a pioneering Indian startup committed to transforming the renewable energy landscape with cutting-edge technology solutions. Based in Tamil Nadu, with a remote office in Karnataka, BiniWorld focuses on integrating IoT, AI, and blockchain to address critical challenges in sustainability and energy management.

Our flagship solutions, SmartSolar Home and GreenWorld Creds, empower small-scale solar producers and households by providing real-time energy monitoring, predictive maintenance, and access to carbon credit markets. Through innovative technologies, BiniWorld enables users to optimize solar energy efficiency, earn monetary incentives, and contribute to a sustainable future.

With a vision to foster a cleaner, greener world, BiniWorld bridges gaps between technology, environmental responsibility, and financial inclusion, making renewable energy adoption accessible and impactful for all.

Problems Solved by BiniWorld

BiniWorld addresses critical challenges in renewable energy adoption and sustainability:

1. Lack of Access to Carbon Credit Markets:

- Small-scale solar energy producers, like rooftop users, are excluded from carbon credit markets dominated by large corporations. This limits their ability to monetize renewable energy contributions.

2. Inefficiencies in Solar Energy Management:

- Solar energy systems often lack real-time monitoring and predictive maintenance, leading to reduced efficiency, shorter panel lifespan, and higher operational costs.

3. Limited Financial Incentives for Small-Scale Users:

- Existing financial models primarily benefit industrial-scale producers, leaving residential and small businesses with minimal rewards for adopting renewable energy.

4. Transparency and Trust Issues in Carbon Credit Trading:

- Carbon credit markets often lack transparency, trust, and inclusivity, making it difficult for smaller contributors to participate effectively.

By integrating **IoT, AI, and blockchain technologies**, we provide solutions that:

- Enable small-scale producers to generate and monetize carbon credits.
- Optimize energy efficiency with real-time monitoring and predictive maintenance.
- Create a transparent and inclusive carbon credit trading system.

Our solutions empower individuals, businesses, and communities to embrace renewable energy, fostering a sustainable and equitable energy ecosystem.

BiniWorld Solutions/ Projects

In BiniWorld we work on IoT with blockchain projects for day-to-day applications; currently there are 7 projects ongoing.

SolarIoT

SolarB EnergyChain

SmartSolar Home

GreenWorld Creds

SmartSolar Farm

BiniBFT

BiniHealth Tech

A high level detail of the projects is given here. Please feel free to write to us at hello@biniworld.com or call us on +91 9483953390 for further discussions.

 SmartSolar Home Decentralized energy management and health monitoring for solar panels.	 SmartSolar Farm Predictive health monitoring for solar farms to ensure efficiency.	 GreenWorld Creds Verifiable carbon credit platform for small-scale solar users.
 BiniHealth Technologies Non-invasive health monitoring solutions.	 ANUs Academy Technology training and internships for youth.	 Blockchain Consultancy & Service R&D of BFT consensus, and providing Blockchain-as-a-Service for supply chain traceability focusing energy, food tech, healthcare, and agriculture.

SolarIoT

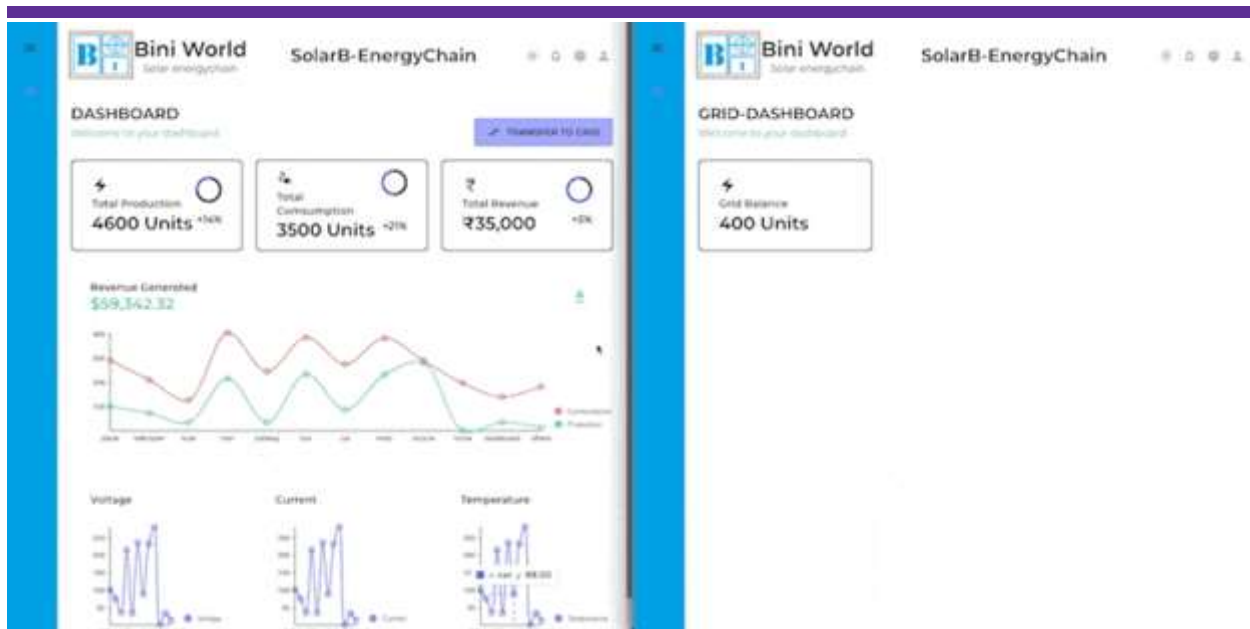
AI and IoT based predictive micro health monitoring of solar panels with the help of surface temperature monitoring. Initial prototype is ready. SolarIoT is the part of SmartSolar solutions, and GreenWorld Creds solution.



SolarB EnergyChain

Permissioned public blockchain based energy management app providing transparency, immutability, and security in a distributed environment. The low level renewable energy creators (say individual homes) and electricity boards can also be involved into the system for collaborative win-win working. Minimal prototype is ready for it too.

SolarB uses BiniBFT consensus for better scalability, throughput, and security.



BiniBFT

BiniBFT is a secure, scalable open source BFT protocol being developed in collaboration with Linux Foundation Decentralized Trust (earlier Hyperledger Foundation). The primitive design of BiniBFT is done as a collaborative learning program, and the [BiniBFT Whitepaper v1](#) is published. Details are found in the following Wiki page:

<https://lf-hyperledger.atlassian.net/l/cp/kd2Q5pr>

A [blog post](#) published in LFDT page too.

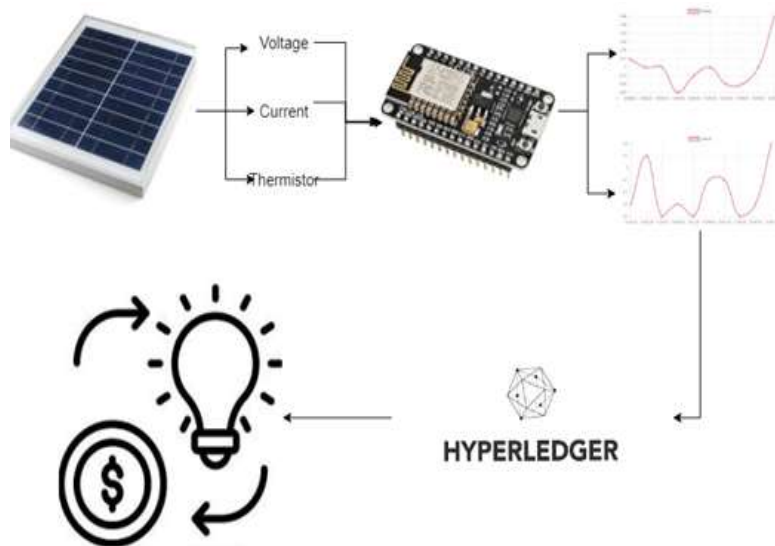
The design is revisited and completed as a mentorship project and is published in the [BiniBFT Whitepaper v2](#). The details are found in the following Wiki page:

<https://lf-hyperledger.atlassian.net/l/cp/WkQ301ZU>

SmartSolar Solutions

BiniWorld's SmartSolar solutions provide a holistic approach for solar energy optimization along with micro predictive health monitoring of the solar panels. SmartSolar makes the blend of SolarIoT and SolarB EnergyChain for the required scale. Depending on the scale used it is called *SmartSolar Home* or *SmartSolar Farm*, but the specifications vary significantly.

The overall model of SmartSolar is:



Innovative elements in SmartSolar are:

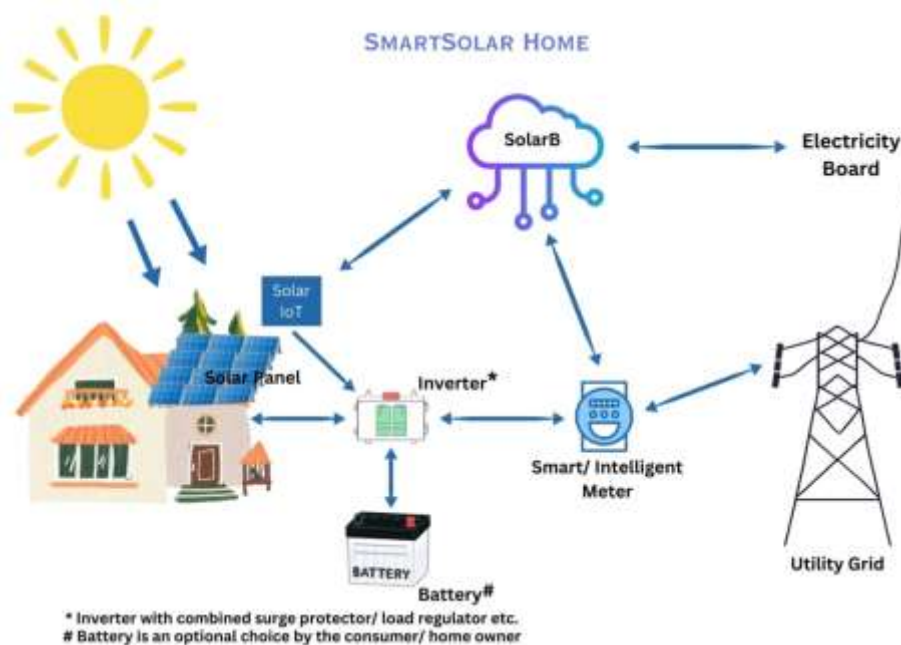


And the unique value proposition:



SmartSolar: Powering a Cleaner, Profitable Energy Tomorrow!

SmartSolar Home



The SmartSolar Home is an IoT (SolarIoT) with blockchain (SolarB EnergyChain) and AI powered solution to act as the revenue generation partner for the consumer and supporting system to manage solar energy produced for the electricity boards.

The results of SmartSolar were published in the 28th International Advanced Computing and Communications Conference ADCOM 2023 by ACCS and Digital University Kerala (earlier KBA) at MakerVillage, Kochi. Paper entitled “SmartSolar: An IoT & Blockchain Enabled Predictive Health Monitoring and Energy Management System for Solar Panels”. Authors are: Anasuya Threse Innocent .A, Bala Murugan M S, Riddhi Ravindra Katarki, Ashna P S, Ajitesh Kumar Soni, and Abhishek Ranjan.

<https://www.linkedin.com/feed/update/urn:li:activity:7139685769052393472>

SmartSolar Farm

SmartSolar Farm is for the autonomous predictive micro health monitoring of the solar panels in large solar farms and data analytics with trustworthiness and security. It will use drones for data collection, AI, and SolarB blockchain. It's in the R & D stage.

BiniHealth Tech

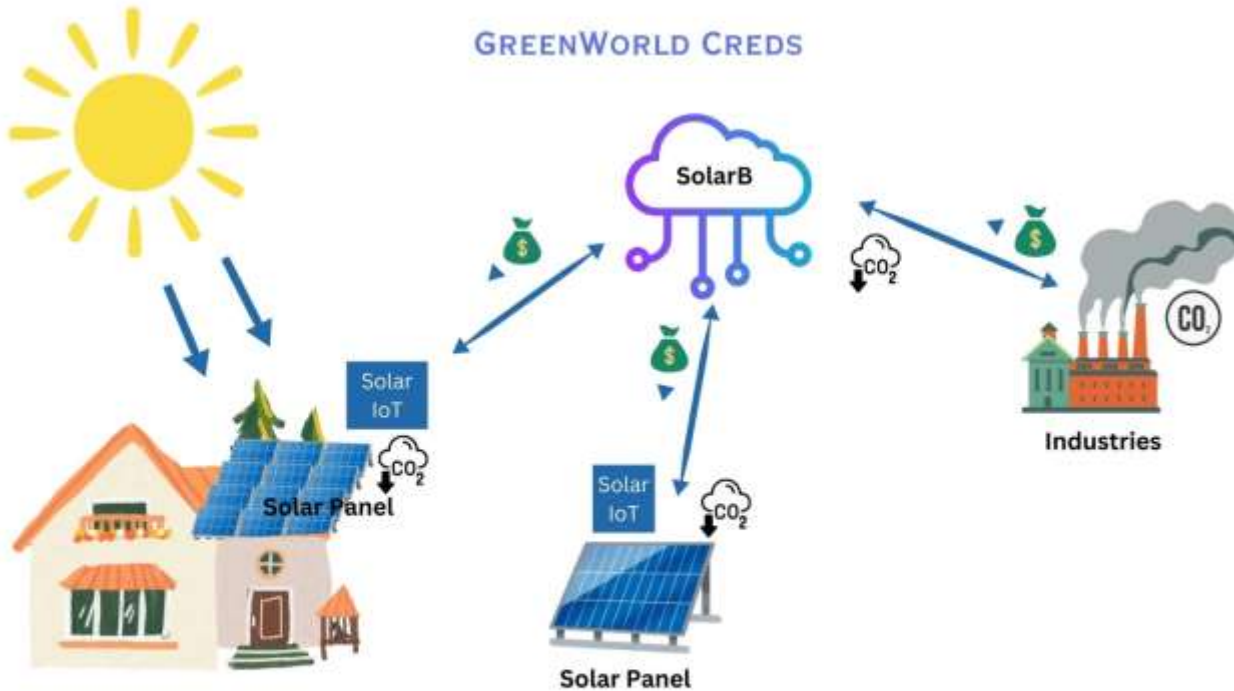
BiniHealth Tech provides technologies for healthcare domain. It is in the initial research period.

ANUs Academy

ANUs Academy is the teaching and learning wing of BiniWorld, focusing on strengthening the basics of younger generation and making them industry ready by providing basic training on languages, industry exposure by internships, and encouraging industry – academia connect.

GreenWorld Creds

GreenWorld Creds is an innovative platform designed to empower small-scale solar energy producers by democratizing access to carbon credit markets. Integrating IoT, AI, and blockchain technologies, it enables real-time solar energy monitoring, and seamless carbon credit monetization. GreenWorld Creds can be used as a standalone solution, or as an add-on with SmartSolar Home.



- * GreenWorld Creds allows the small-scale solar energy producers to participate in carbon-credit market and monetize the carbon credits
- # It also helps the industries to reduce their carbon offset.
- * SolarB blockchain provides trustworthiness with zero-carbon emission

Achievements of BiniWorld in the 3rd Year!

As with any other startup, we too faced/ are facing a lot of struggles, rejections, and are learning new experiences with each one. Hiding the thorns, we showcase the roses to carry us to the next year for a successful journey forward..

The achievements not just showcases the professional milestones, but also the meaningful collaborations and networking with both industry and academia, as BiniWorld strongly believes to be a bridge between academia and industry.

January 6, 2024

BiniWorld YearBook 2023 released.

BiniWorld
YEARBOOK 2023

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A big big thank you!

January 29-30, 2024

Our Founder, Dr. Anasuya attended the ***Innovation Summit 2024: For Sustainable Development Goals, Powered by Diamante Blockchain*** with the theme: "Where the Brightest Minds in Technology Converge to Redefine the Boundaries of Innovation and Collaboration" on 30th January, and it marked a powerful beginning.

The Innovation Summit 2024, a pivotal two-day event, is a celebration of technological innovation, collaboration, and investment. Organized by the Government of Karnataka, the Private Office of His Highness **SheikhMohamed Bin Ahmed Bin Hamdan Al Nahyan**, Diamante Blockchain Holdings Inc.,

and Block Stack Pvt. Ltd., this summit marks a unique collaboration between Abu Dhabi and Karnataka. A lot of meaningful connections were made at the summit.



January 31 – February 2, 2023

India Electronics Week, IOTshow, smartBHARAT and B2B Tech Expo by EFY group was another grand event with a lot of learning, and networking. Dr. Anasuya attended on all 3 days at KTPO, Whitefield, Bangalore and made the most of it for BiniWorld.



February 22-23, 2024

In the Second International Conference on Emerging Trends in Information Technology and Engineering (ic-ETITE'24) conducted by School of Computer Science Engineering and Information Systems (SCORE) along with IEEE & ACM chapters, Dr. Anasuya was invited as jury for a presentation session and panel speaker. It was a nostalgic and energetic experience.



VIT
 Vellore Institute of Technology
 School of Computer Science Engineering and Information Systems(SCORE)

Technical Cosponsor
IEEE
 Institute of Electrical and Electronics Engineers

ic-ETITE'24

IEEE and ACM presents
 Second International Conference on Emerging Trends in
 Information Technology and Engineering (ic-ETITE'24)

DISCUSSION SPEAKERS
Anasuya Threse Innocent
 Founder and Director BiniWorld Innovations
 Private Limited, Bengaluru

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March 5, 2024

Mr. Shiju Babu started mentoring BiniWorld Innovations. He is also a Startup India mentor.

March 5, 2024

Blog post of [BiniBFT - An Optimized BFT on Fabric](#), the collaborative learning program successfully completed in January 2024 was published by [LF Decentralized Trust](#).



March 12, 2024

Dr. Anasuya handled the second day of Faculty Development program on “Navigate the Blockchain Ecosystem: A Five Day Journey” at VIT Chennai, virtually; and gave sessions on Applications of blockchain, Hyperledger projects and use cases. It was a very well received and informative session.



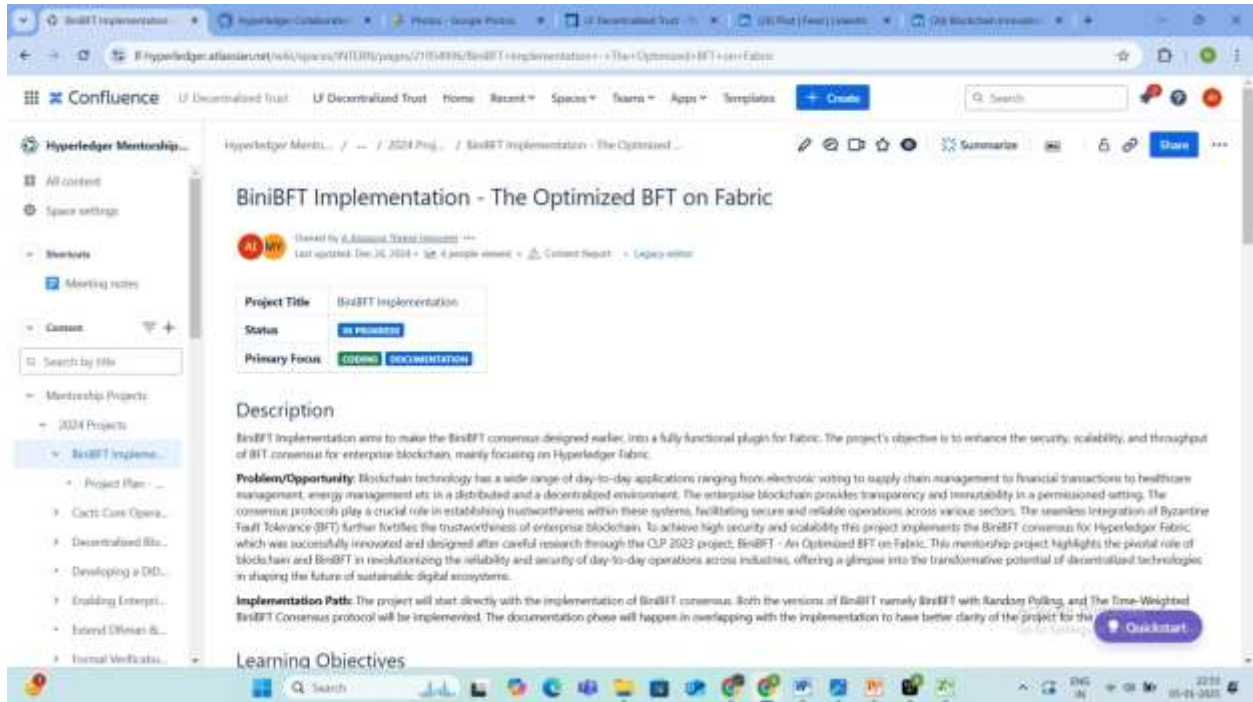
March 27, 2024

Dr. Anasuya gave a seminar on “Blockchain Basics” to VIT Chennai campus M.Tech students.



May 1, 2024

BiniWorld's [BiniBFT Implementation](#) project selected as Mentorship project for 2024 in LF Decentralized Trust.



May 24, 2024

BiniWorld appeared for the final presentation of TANSEED 6.0 grant pitching, virtually.

June 6, 2024

BiniBFT Implementation – LFDT collaborative Mentorship project started.

August 6, 2024

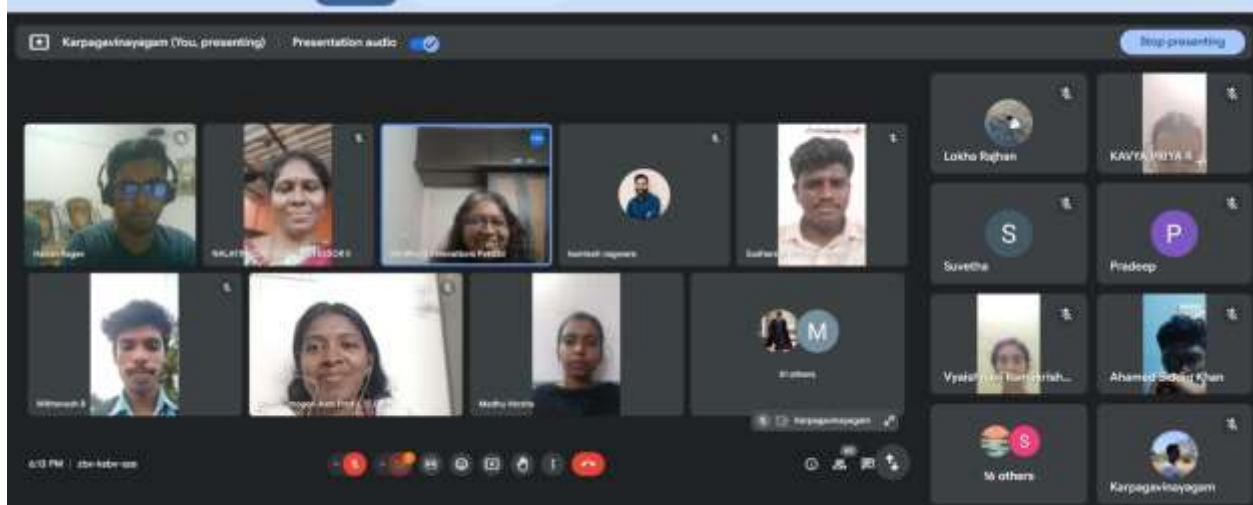
Raju Owk promoted to Paid Mentee from Volunteer Mentee in BiniBFT Implementation project.

August 13, 2024

BiniWorld selected for IIMB - NSRCEL WSP5, **Foundations of Entrepreneurship** program

August 20, 2024

Dr. Anasuya, as a Chief Guest, inaugurated the Hackathon – BLOCKATHON'24 at VEC, Chennai, virtually.



August 16 - 31, 2024

Dr. Anasuya, as the core member of LFDT India Chapter, organized the virtual hackathon, HyperHack 2024 and successfully conducted it.





CERTIFICATE OF COMPLETION



HYPERHACK 2024

Organizer

CONGRATULATIONS AND THANK YOU

For contributing your time and innovative Ideas

The Certificate is Awarded To

Anasuya Threse Innocent

A



VERIDOC SECURED



August 21, 2024

SmartSolar patent application process started.

August 27, 2024

Dr. Anasuya attended the Bangalore Meetup of LF Decentralized Trust and was being the part of the official announcement of LFDT (earlier Hyperledger Foundation). It was a great event to network with blockchain tech people.



October 15, 2024

NaCab Labs celebrated our Founder Dr. Anasuya as their first female speaker and had an Ask Me Anything session on Blockchain. It was a great information sharing session.



Blockchain Innovations for Enterprises

Event by Nadcab Labs

Tue, Oct 15, 2024, 12:08 PM (your local time)

October 20, 2024

Dr. Anasuya received the **Digital Health** certificate from IISc Bangalore in collaboration with TalentSprint. This course started almost a year ago.



November 6, 2024

IIMB – NSRCEL WSP5, **Foundations of Entrepreneurship** program successfully completed.



November 21, 2024

Dr. Anasuya attended the Bengalure Tech Summit 2024 conducted at the Palace Grounds and made a lot of meaningful connections.



December 7, 2024

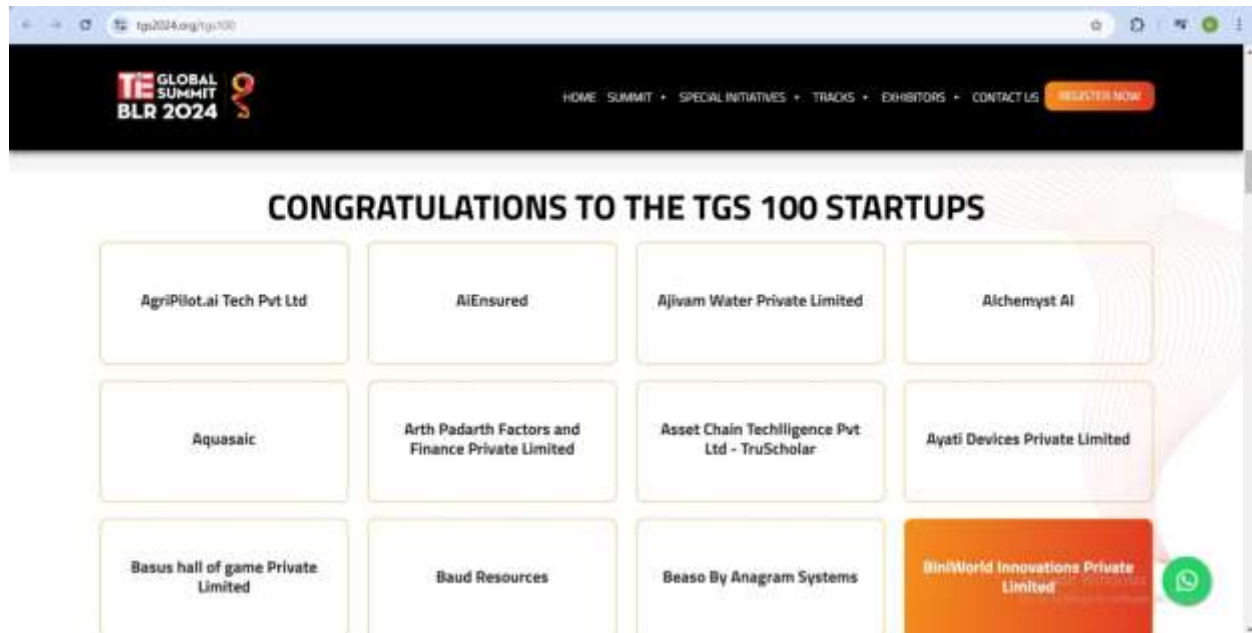
Dr. Anasuya along with the LFDT India Chapter core members organized the Blockchain TechFest 2024 at HCLTech, Jigani campus, Bangalore. It was a successful event, lot of knowledge sharing, and making new connections.



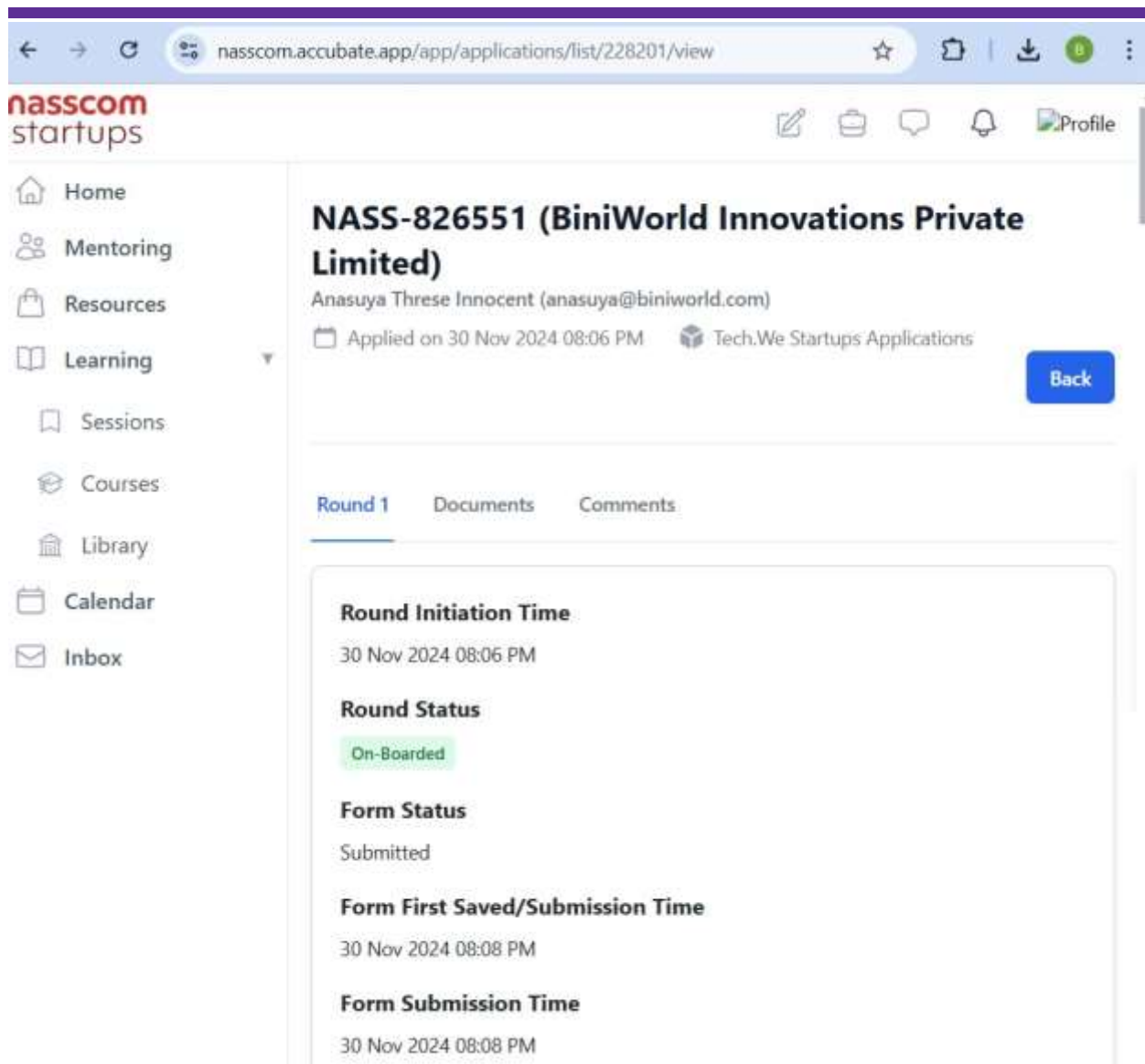


December 9 - 12, 2024

BiniWorld selected as one of the top **TGS100 startups** in the TiE Global Summit 2024. Our Founder Dr. Anasuya pitched in front of the VCs and industry experts during the event and marked a place for BiniWorld into people's heart.







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NASS-826551 (BiniWorld Innovations Private Limited)

Anasuya Threse Innocent (anasuya@biniworld.com)

Applied on 30 Nov 2024 08:06 PM Tech.We Startups Applications

Back

Round 1 Documents Comments

Round Initiation Time
30 Nov 2024 08:06 PM

Round Status
On-Boarded

Form Status
Submitted

Form First Saved/Submission Time
30 Nov 2024 08:08 PM

Form Submission Time
30 Nov 2024 08:08 PM

December 31, 2024

BiniWorld's MentorTN nurture cohort 1 successfully completed.

Apart from these, our Founder as the Co-Chair of [LFDH Healthcare Special Interest Group](#), organizes monthly meetings, and she takes care of the young minds registered with ANUs Academy.

Many more awards & achievements to be conquered in future!!

BiniWorld Wishes You all a Blessed Year Ahead!

BiniWorld Innovations Pvt Ltd
INNOVATIONS FOR FUTURE WORLD!



Wishes you a very



hello@biniworld.com | +91 9483953390

Contact

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THANK YOU !