RCC INSTITUTE OF INFORMATION TECHNOLOGY

ITerate

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CONTENTS

The State of the Blockchain and Cryptocurrency Job Market in 2019

Last year, the crypto job market felt different, but overall it was a good different.

2019 was characterized by a volatile cryptocurrency market, a succession of high-profile layoffs, but also the creation of new blockchain jobs, the growth of Decentralized Finance, and increased awareness of Bitcoin.

Cryptocurrency Layoffs

There were high-profile layoffs at cryptocurrency companies that began at the end of 2018 and continued throughout 2019.

The reasons cited for the layoffs were regulatory concerns, market conditions, and the need to streamline operations to refocus on profitability. ConsenSys, a blockchain venture production studio, announced a strategy shift to streamline its business, which led to a 13 percent reduction in its team. Steemit, a blockchain-based social media platform, laid off 70 percent of its staff, and Shapeshift, a digital asset exchange, reduced the size of its team by a third.

In November 2019, New York-based blockchain analytics firm Chainalysis laid off 39 employees, about 20 percent of its workforce, and Circle reported layoffs in May and a new round in December.

At the end of December, Bottle Pay, a custodial bitcoin wallet provider, shut down operations in response to the EU's Fifth Anti-Money Laundering Directive (5AMLD) that comes into effect on 10th January 2020. The 5AMLD introduces stricter regulatory controls across more sectors, including cryptocurrencies. Several other European firms have shut down in response to the new Directive.

Cryptocurrency mining company Bitmain closed its Israel-based research and development arm and laid off more than 50 percent of its employees.

Recent reports suggest that Bitmain has plans to further reduce its workforce this year before the Bitcoin block reward halving that is likely to occur in May.

Many smaller firms also closed during the year.

Market Volatility and Cryptocurrencies
The volatility in cryptocurrency prices continues to affect the blockchain job market.

Devin Banerjee, a Senior Financial Services Editor at LinkedIn, plotted the proportion of new hires that are blockchain developers according to LinkedIn data, with the monthly price of bitcoin.

Blockchain developer hiring

The data shows how the hiring market for blockchain developers tends to follow BTC prices. In LinkedIn's recent US Emerging Jobs Report, which identifies the top 15 jobs that have emerged over the last five years, Blockchain Developer, is no longer present. Last year, it topped the list.

The report cites that this "may not come as a surprise given the rapid decline in popularity of Bitcoin and other cryptocurrencies."

As the Emerging Jobs analysis is based on LinkedIn members with a public profile, I should mention that many within the crypto space do not have a LinkedIn profile for security reasons, and several crypto profiles on the professional networking site have been found to be fake.

Based on Cryptocurrency Jobs data, despite the bear market and volatility in cryptocurrency prices, demand for blockchain talent and interest in working in the crypto space has remained strong throughout 2019.

Although the LinkedIn Report states that there has been a rapid decline in the popularity of Bitcoin and other cryptocurrencies, a survey conducted by The Harris Poll on behalf of Blockchain Capital presents a different picture.

Despite the bear market, the data shows that Bitcoin awareness, familiarity, perception, conviction, propensity to purchase and ownership all increased/improved significantly — dramatically in many cases. The results highlight that Bitcoin is a demographic mega-trend led by younger age groups. In Electric Capital's Developer Report H1 2019, which focuses on developer activity from June 2018 to June 2019, the authors conclude:

Despite market downturns in 2018, Full Time developers increased 13% year-over-year in June 2019 and are consolidating around high network value projects.

Code commit volume is consistent but total monthly active developers are down 10% Y/Y.
80% of developer loss came from One Time per month and Part Time developers.
The biggest developer drop-off came from projects outside of the Top 100 by network value.
Smart Contracts, Infrastructure, and DeFi ecosystems continue to gain Full Time developers.
Overall crypto ecosystems are approaching the size of well known open source projects such as Apache, but still has plenty of space to grow.

The crypto space is also global, and there has been much activity outside the US.
In LinkedIn's Emerging Jobs 2020 report for India, Blockchain Developer tops the list of emerging jobs.

The country is seeing a rise in digital transactions, and therefore industries are ramping up investments in blockchain. This strong demand for blockchain tech talent puts 'blockchain developer' on top of the list.
--Key Findings from Cryptocurrency Jobs
During 2019, 1135 crypto and blockchain jobs at 472 companies and startups were posted on Cryptocurrency Jobs.As in previous years, the crypto space continues to be dominated by engineering roles.

Here's a breakdown of blockchain jobs distributed across roles:
Customer Support: 7%
Design: 10%
Engineering: 31%
Marketing: 13%
Operations: 17%
Other: 13%
Sales: 9%

With the refocus on profitability and bringing products to market, there has been an increase in blockchain design, marketing, and sales roles.

Compliance, legal and regulatory related roles have also seen an increase in demand, which reflects the changing regulatory environment for cryptocurrency companies.
Regulators have also had to increase their digital
Unfortunately, two common myths continue to come up in my conversations with job seekers that I want to dispel.
You don't need to be a developer to work in this space. Over 40 percent of jobs on Cryptocurrency Jobs are non-technical.

You also don't need prior blockchain work experience. Although some companies require previous experience, many are more interested in your prior work experience and that you are passionate about working in the space. This is true across roles.

If you are interested in working in crypto, please apply. Do not self-reject.
asset teams.

During the year, the US Securities and Exchange Commission posted job openings for a Digital Asset Expert and a Securities Compliance Examiner (Blockchain Expert).
The US Federal Reserve has been looking to hire a manager to oversee its traditional payments section and research "digital currencies, stable coins, distributed ledger technologies, and broadly financial/digital innovation in retail payments."

The major employers continue to be cryptocurrency exchanges. Research by The Block found that 42% of blockchain industry employees work for cryptocurrency exchanges, with another 10% for mining hardware manufacturers.

2019 was also the year of Decentralized Finance (DeFi). The explosive growth in DeFi contributed to many new job openings.

Most crypto job opportunities are in San Francisco and New York. In Europe, the main hubs are London and Berlin, and in Asia, it's Singapore and Hong Kong. In Latin America, it's Buenos Aires.
An exciting trend in 2019 was the increase in crypto job opportunities in Africa.

DMany will be looking at Africa this year as Jack Dorsey, CEO of Square Crypto and Twitter, has announced plans to move temporarily to the continent following a month-long visit to entrepreneurs.

The Cryptocurrency Job Market is Maturing

In addition to the growth in blockchain job openings, another sign that the crypto industry has matured is the high-profile executives that have entered the space.
During 2019, there were many notable hires from Wall Street, the tech industry, government, and beyond.

Coinbase hired LJ Brock as Chief People Officer from Citadel
Cred hired Joe Podulka, a former PayPal executive as its Chief Financial Officer
Bakkt hired Erik Haas, who previously headed the regulation department at ICE, as Director of Compliance

Tradewind Markets hired Leon Shklar, a former Managing Director of Technology at BNY Mellon, as its Chief Technology Officer
Amber Group hired Jeffrey Wang, a former Head of Derivatives Trading for Asia at Morgan Stanley

Square Crypto hired former Google Director Steve Lee as Head of its newly formed team
Gemini hired Julian Sawyer, former co-founder and Chief Operating Officer at Starling Bank, to manage its European operations

C Labs hired Jai Ramaswamy, former Head of Enterprise Risk Management at Capital One, to head up its global regulatory, risk and compliance matters

Blockchain hired Howard Surlof, former Deputy General Counsel of Blackrock and Global Chief Operating Officer of Blackrock's iShares and Index business, as General Counsel
Crypto Optimism.

Since I launched Cryptocurrency Jobs in 2017, I've interacted and helped many people that want to transition into the crypto space.
Despite the bear market, company layoffs, and uncertainty in the space, job seekers remain optimistic.

From the high school teacher to the corporate professional to the undergraduate,
they're all looking for an opportunity to join the crypto industry.

Although they express many reasons for why they want a career in crypto, a common factor is that it presents them with the opportunity to work on something that has never been done before; to build a better system, a decentralized future.

You must work on something that inspires you and others, you must work on something with a significant impact, and you must do it in a way that makes getting where you want to go as easy as possible and keeps you there as long as possible.
-- Fred Wilson, Partner at Union Square Ventures

Anupriya Ladha, 1st year, IT department.

3

Rise of OTT Platforms

It is not common today to watch any film or any show on television with family because everyone has their own choice. Therefore, people like to watch movies/shows on mobile phones or PCs. The platform you are using, be it MX Player, Amazon Prime, or Netflix, falls under the OTT platform. OTT platforms stand for Over the Top platforms. With the diverse taste and preferences of people, OTT platforms have become popular these days. Those days are gone when people would rely on the television to broadcast their favourite show. People nowadays subscribe to OTT platforms.

OTT platforms stream audio and video services through the internet. The OTT platforms are technically advance and use artificial intelligence to provide a better experience to the user. Using artificial intelligence, the content which the user is likely to watch is shown on the basis of the previous content viewed by the user. This gives the user an advantage of personalized suggestions based on the history of content they like and are interested in.

India started the journey of OTT platform with BigFlix. It was launched by Reliance Entertainment in 2008, BigFlix became India's first OTT platform. OTT started thriving in India in 2013 after the launch of Zee TV and Sony Liv. Disney Hotstar came into the OTT world in 2015. Later, Netflix began providing its service in India from the beginning of 2016 and competing with the platforms like Amazon-Prime Video and Disney+Hotstar. The rapid growth of the OTT platform in India can be said by looking at the statistics that by 2024 India is set to become the sixth-largest OTT market in the world.

REASON FOR RAPID GROWTH OF OTT PLATFORMS:

The best thing about the OTT platform is that it is differentiated from a normal TV set is you can watch your show anytime, anywhere. This level of convenience we can't get in TVs. And other important thing is that The OTT platform gives you the option to watch anything like you can watch movies, web series, TV serials, Sports even there is option for kids too, kids can enjoy their cartoon shows also. Regional OTT platforms have helped to connect a large section of people to quality content. It has also given variety to the content with the taste of the particular language. Some TV shows, as well as films, are streamed on online platforms long before they are launched in general television.

IMPACT OF PANDEMIC AND LOCKDOWN

Before the covid-19 pandemic, conventional TVs and cables were more popular. With the lockdown and restrictions on social gatherings, TV shows and theatres came to a standstill. Even the shooting of every film, serials were stopped. To overcome the boredom in the lockdown and divert attention from negative thoughts, people found different ways to keep themselves happy. That time period many people get started watching and subscribing to OTTs. Thus, new OTT platforms came into existence, and the industry grew drastically.

OTT platforms have proved to be more convenient and flexible. However, movie theatres give a unique experience of movie watching. The Increasing OTT craze has posed a major challenge for the theatres. The lifestyles of people are changing, which has increased the number of people who can buy a subscription, rather than waiting for the tickets and going to the theatres people now prefer paying and consuming content from their home. Additionally, the rise in OTT platforms and streaming apps has challenged these platforms to present better content.

Diptadeep Mitra
IT2020/097

Cryptography

Cryptography provides a method for secure communication. It stops unauthorized parties, commonly referred to as adversaries or hackers, from gaining access to the secret messages communicated between authorized parties. The method that cryptography provides is called encryption.
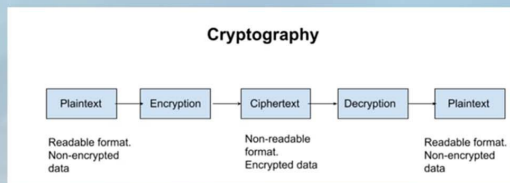
Encryption transforms a key and input, the plaintext, into an encrypted output, the ciphertext. Encryption algorithms are only considered secure if attackers cannot determine any properties of the plaintext or the key when presented with only the ciphertext. An attacker should not be able to find out anything about a key, even if they have many plaintext/ciphertext combinations that use that key.

A real-world example would be credit card information that you use for purchases on Amazon or other e-commerce sites. The code in your web browser encrypts the plaintext, your card number, into ciphertext, which to someone without the keys would look like illegible, random text. However, once your card number reaches its intended recipient, the online store, their software would decrypt it back into plaintext so they can charge you for your purchase.

Principles of cryptography
The core principles of modern-day cryptography include:
• Confidentiality
• Integrity
• Non-repudiation
• Authentication

Cryptography

| Plaintext | → | Encryption | → | Ciphertext | → | Decryption | → | Plaintext |

Readable format. Non-encrypted data | Non-readable format. Encrypted data | Readable format. Non-encrypted data

MOHAMMED SAAD KABIR, 1st year
IT2020/006

What is Blockchain?

Blockchain is one of the fastest-growing IT technologies. It has extensive real-world uses, but industries are still struggling to leverage the true potential of Blockchain solutions. Now, the question is, can you use Blockchain-as-a-service (Baas) as a potentially workable solution?

Do you know: 44 % of enterprises are widely using Blockchain across the world? Do you know: Blockchain is one of the most secure online transactions that have impacted all the industries, and soon it will be a core part of the numerous sectors of different niches.

What Is Blockchain-as-a-Service (BaaS)?

We heard a lot about SaaS but we have BaaS also. BaaS is a new evolution in the blockchain technology field. It is the third-party creation & management of cloud-based networks. BaaS is primarily to design & develop Blockchain apps. It is not just for cryptocurrency; it is witness to all types of transactions. It is a significant development and an essential milestone for enterprises.

BaaS allows businesses of all types and sizes to access blockchain technologies at zero in-house development cost. The BaaS model allows enterprises to retrieve blockchain providers' services to develop the blockchain apps at a minimal cost.

As per Fortune Business Insights report, the global blockchain-as-a-Service market size will reach USD 24.94 Billion by 2027, exhibiting a CAGR of 39.5% during the forecast 2020-2027.

Some Benefits of BaaS Business Model :

1. Increased Data Security
2. Low-Cost Access
3. Anywhere Access
4. Higher Compatibility
5. Better Software
6. Massive Scalability

Is there is any Limitations?

Yes, the only limitation in the Baas model is that it demands a certain amount of centralization. Why? Because you need to funnel transactions through the blockchain services of the host. Therefore, companies need to rethink whether they should adopt or not.

Final Words: At present, Blockchain-as-a-Service is a unique way to streamline the digital transformation process. It can help your business take a competitive advantage without investing in research, planning, and infrastructure. So, what are you waiting for?

NAYAAB KHAN, 1st year
IT2020/052

The use of technology in education

Before we know what technology is used for, we need to know exactly what technology is.Basically,technology is the application of scientific knowledge to the practical aims of human life.But do we really need technology in our real life?The answer is yes, because we rely on technology all the time, from waking up in the morning to going to bed at night.

Recently, technology has become essential for both teachers and students because of its importance in today's education industry. As technology has become more accessible, it has penetrated into every part of our lives. Schools have also embraced technology as an integral part of their education process and, as a result, they now offer computer science classes, where students learn how to code computers and use them for their work or projects.

The use of educational technology has therefore become more important for our future generation.It Helps Improve Learners' Communication Skills And Performance In School And Workplace Settings.The vast array of educational technology offers students a wide range of options from which they can choose the best ones for their learning needs.

This helps them develop their skills and knowledge.It Allows Students To Improve Themselves Both Mentally And Physically.In today's world,the internet is a very essential for students to be able to access the internet from anywhere at any time so that they can do their assignments and research without having to travel. And IT engineers are constantly helping us to make everyday things like the internet, mobiles etc. easier and more beautiful.Because,Engineers are a part of this society who don't sit back and watch – they make things happen using innovation, creativity and a wealth of knowledge.

Parna Saha, 1st year, IT2020/086.

Exploring the world of Spring framework

In today's world there are so many emerging new technologies and tools , still Java(introduced in 1994) and Spring framework(introduced in 2002) though being such an old programming language and framework respectively used in almost every renowned Multinational Companies(MNCs) and fintech companies. There are many reasons for using Spring framework which will be explored in this article.
Nowadays we experience so many emerging technologies like Node.js, Django etc. We will make a brief comparative study with Spring Framework and investigate where to use the emerging technologies and where to use Spring and why Spring framework is still used in the IT industry.

Why Spring Framework?

When we are saying why Spring Framework, we mean to say why Spring when we have Node.js, Ruby on Rails, Django etc. It is important to note that though Node.js and other backend frameworks are faster than Spring but still Spring holds the market because of its unique features. Let us try to understand one by one.

1. The Beauty of Spring -- Loosely Coupled Application

Loosely Coupled Applications: - In Loosely coupled application, each component hardly depends on other components. So if the components have a very low dependency on other components, then the modification and changing the other components and features will not be affected much. Thus, component and feature modifications become super easy and less prone to error in loosely coupled applications.
So, yes loosely coupled applications are the beauty of Spring Framework and for achieving Loosely Coupled Apps Spring uses the principle-
a) Dependency Injection and
 b) Inversion of Control.

a) Dependency Injection (DI)

For achieving loosely coupled applications, Spring offer us the privilege of not bothering about the object creations. The creation of objects will be handled by Spring Framework itself. We just need to focus on our Business Logic and whenever we need an object, we just need to give hints to Spring Framework and it will inject the dependency or object or bean on behalf of us. If it feels too technical then in one liner just we have to focus on the business logic of project and whenever we need objects just give hint to Spring it will create the object and present to us.

b) Inversion of Control (IOC)

Inversion Of Control means that even though the power of objects creation usually should be in the hands of the developer but Spring is doing it instead and so as if the power is inverting from developer to Spring . Actually, DI and IOC are explaining the same feature in two different ways.

2. Spring framework, a good choice for heavy computational tasks

Java with Spring is a potential good candidate for heavy computation tasks whereas node.js is suitable for high IO projects. For example, in many Fintech companies, Node.js fails in performing the computational tasks like fetching different parameters for doing transactions. As a consequence, we have to redirect the Node-APIs to Spring.

 Spring Framework vs Node.js, Python-Django and other back end framework

In the back end world, we have many choices as the back end defines the business logic of our product so we use back end frameworks depending upon our needs.

 If we need high IO processing and faster web apps then we should use node.

◻ **I**f we want to develop web apps faster much faster for startups then we should use Python-Django or Ruby on Rails.

◻ But if we need a full-fledged web app for an enterprise level and where security is a constraint and where the community provides faster solutions of doubts, then we should go with Java Spring Framework.

◻ **Choosing Spring-Boot for faster development**

After realizing the importance of Spring framework,now it is time to understand how to start Spring based projects. We will be using Spring-boot which is a module of Spring Framework and it makes even easier to develop web apps with Spring-boot than Spring as it does 1. Auto-Configuration on behalf of us 2. Takes care of version mismatch. It is recommended to explore spring first to experience how in core-spring we have to perform too many tasks manually. But again, if anyone lagging in time, he/she can directly jump to spring-boot. In the following sections of our article, we will limit our discussion to highlighting few limitations of spring and overview of Spring-boot .

◻ **Choosing Spring-Boot for faster development**

After realizing the importance of Spring framework,now it is time to understand how to start Spring based projects. We will be using Spring-boot which is a module of Spring Framework and it makes even easier to develop web apps with Spring-boot than Spring as it does.
1. Auto-Configuration on behalf of us.
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⬛ Problems with Spring and the Introduction of Spring-boot

In Spring, when we need some external functionalities which we call dependencies we have to find it in Maven repository manually and then we need to add it to the pom.xml file which leads to the problems -**1. A lot manual efforts for small things 2. Version mismatch.**
Spring-boot solves it by auto-configuring things and it also takes care of version mismatches. Spring-boot adds automatically dependencies in pom.xml file. One can check it by visiting the site Spring initializr.io. Click on add dependencies and type web then add spring web.

Now click on explore Ctrl + Space and see the configurations and understand the configurations.
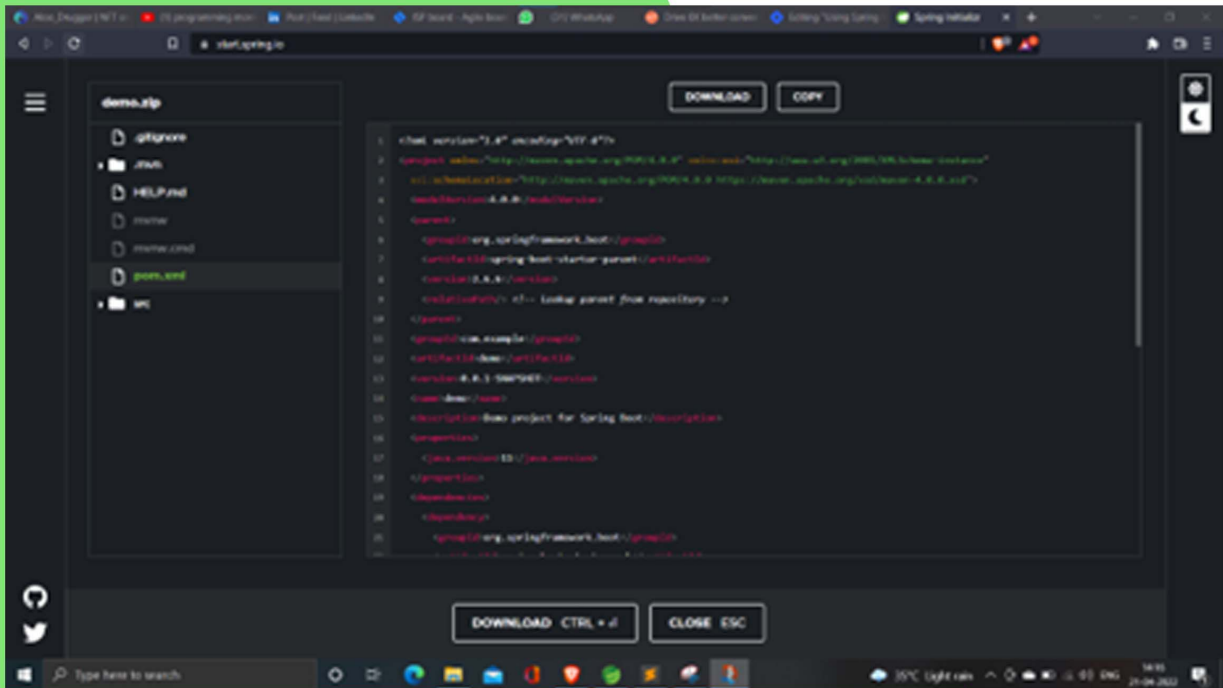
Now for developing the project model we need to understand the project model. In spring-boot we use 3 tier model for developing project.

1) The first is the DAL/DAO layer in which we connect the database to our app.

2) The second is the Service layer where we write our business logic.

3) The last layer is the Controller layer where rest endpoints or Rest Api's are exposed.

▧ Why three tier model for developing projects?

There are many benefits for using the 3-tier model as in this model we separate our business logic from other layers and whenever we need to change our business logic, we just need to make a change in Service layer. Moreover,three tier model offers loosely coupled features.

⬚ Conclusion

In this article, in short we have given an overview of Spring Framework and its module Spring-boot .Moreover,we have explored briefly some important concepts DI and IOC, advantages of Spring Framework and how Spring-Boot make developing web apps more simpler, why to choose spring-boot over Node,the concepts of Loosely Coupled Applications and three tier Model.

Dipan Bandyopadhyay,

Assistant Professor,Information Technology

Md Sakib,

3rd Year, RCC Institute of Information Technology

PROJECTS

CRWN-CLOTHING
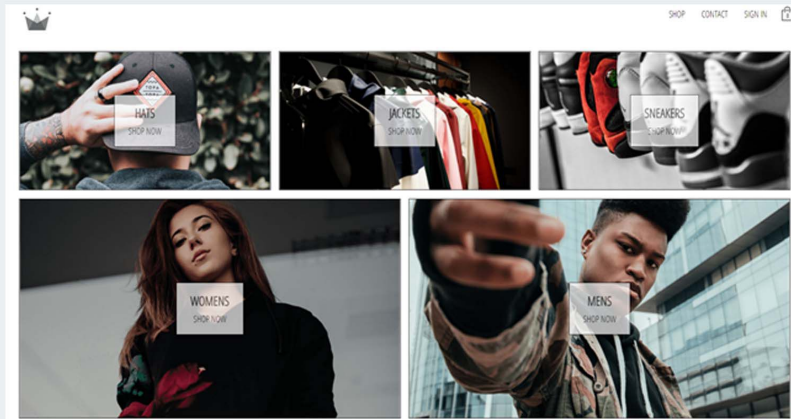
Hi there! I'm very much excited to share my favorite personal project which I have been working on since JAN 2021. It was a whole lot of fun as well as depressing a few times building this project on my own but the ultimate satisfaction after building this project is just on the next level. First let's talk about the fun part of the project.
I started this project on a note that it will be only a frontend project that means there will be no backend and it will be a static website with some basic functionalities.

As you all can see, I just randomly called this website as CRWN CLOTHING because it has a crown logo hah! Funny isn't it?.

Doing this project I've used the most popular open-source frontend JavaScript Library which is REACT .This project is complete an ECommerce Website where you can see the products , you can add it to the cart and the cart number and the cart items it will increase automatically as you keep adding into it, and the most amazing part is you can also purchase the products, and happy to say that this website is fully responsive. The only thing is left to remove the test mode from the platform so that it can actually receive the original payments.

Now let's talk about the skills which I've used in this project :-
Frontend :-
-> React
-> React Router V6
-> Styled Components
-> Redux
-> Redux Saga
-> Hooks
-> JavaScript
Backend :-
-> Express Js
-> Node
-> Stripe (For Payments)
-> Firebase (DataBase)
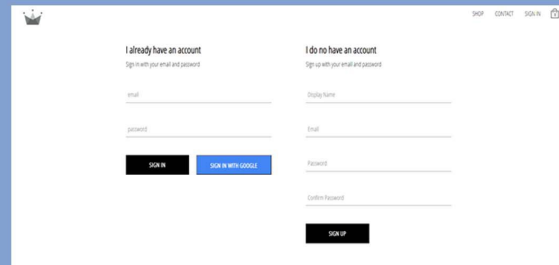
Here, as you all can see I've used Firebase as my database and also for my google O-Auth authentication where you can Sign-In and it will automatically direct you to the home page where you can explore the website as a signed in user. Your name, your email address will all get stored in the database after you get inside the website.

I'm still on this project and it's ongoing because refactoring and maintaining good code is very important and I look at myself as a team leader so it's my responsibility to make this project free from bugs as much as possible .

Link :- https://crwn-developer-config.herokuapp.com/   Rohan Banerjee IT2020/100._

Android one to one Chat Application:

Created a fully-fledged android chat app in Android Studio with Java and XML that allows you to chat with your friends and family. The messages that you send and receive are AES Encrypted and is stored securely using Firebase. It has a clean and responsive UI made completely from scratch and well optimized. The user will be asked to Sign in/ Sign up with their Email id and password or they can sign in with Google/ Facebook. For sign up user can choose their display picture of their choice from gallery and can set their status which will be stored in firebase real time database for easy access. The user can logout form their account anytime without worrying about their chats being deleted, the chats will be saved in firebase database and can be accessed form any device after logging in.
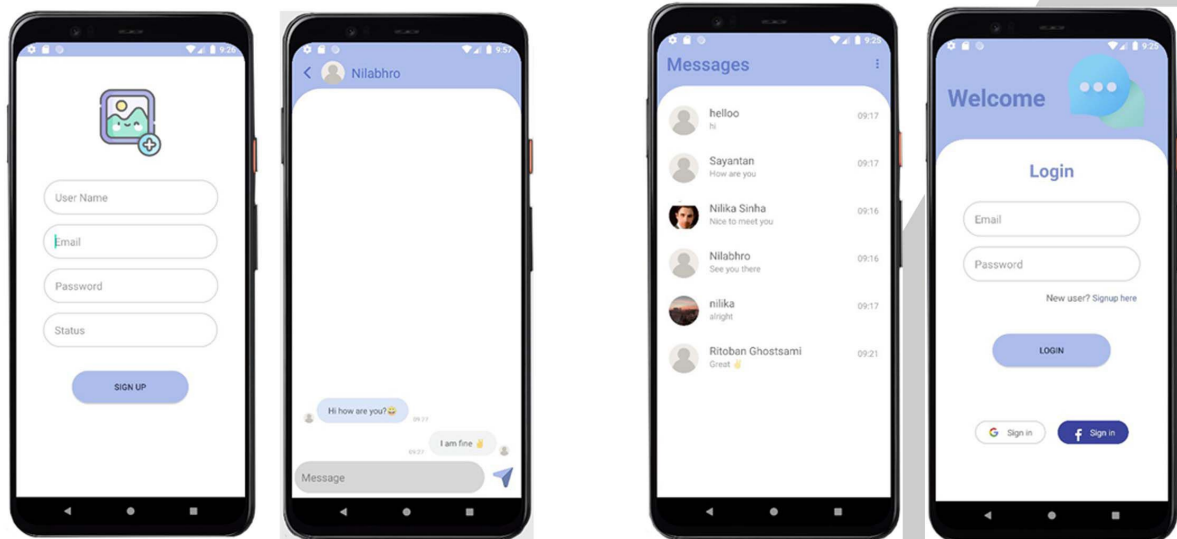
-Nilabhro Sinha, 1st year, IT2020/077

REAL -TIME FOOD DELIVERY APP

Here is a brief description of our project. It is named "food app", and its main objective is to track real time status of the food that is ordered (for example: confirmation, preparation, pickup, delivery, item received).

The web-app consists of a register page where an unregistered user can register himself/herself, and login afterwards for personalised updates about his/her order.
The logged-in user can then order their desired item that are listed and they will be redirected to the payments page where they have to plug in their delivery details and complete the payment. After this the order will be displayed in the admin portal and whatever changes made in the order status by the admin will be visible to the customer in real time

The tools that are used for these operations are described below:

ExpressJS, JavaScript, Passport JS, Sass, MongoDB, HTML, CSS, Socket.IO.

The problems faced are:
1) To set dynamic data in the webpage.
2)To track real time counting of items added in the cart.

Project By: Dipesh Shaw, Debal Sen

IMAGES OF THE PROJECT

IMAGES OF THE PROJECT

IMAGES OF THE PROJECT

Project By: Dipesh Shaw, Debal Sen

Stock Market Prediction with Big Data Analytics using Machine Learning

Our problem statement was how Data Analytics using Machine learning algorithms can be supportive for future market trend predictions?
We used the historical stock prices of Microsoft stocks obtained from Google. The data was split into train, validation and test data. Then we trained our data on three sequential deep learning architectures, RNN and LSTM for our research. Each model has been tested on the test set and their Mean Squared Error (MSE) is calculated. With this model we were able to predict the data with the highest accuracy till date which is 95%.
We used Python syntax for this project. As a framework we used Keras, Google's TensorFlow, matplotlib for data visualization, Numpy for various array operations and Pandas for data analysis. For the Web UI we used Python's Streamlit.

Group Members:
Prajnadipta Kundu,
Susmita Kar,
Saunak Dasgupta,
Abhirup Tapadar.

IMAGES OF THE PROJECT
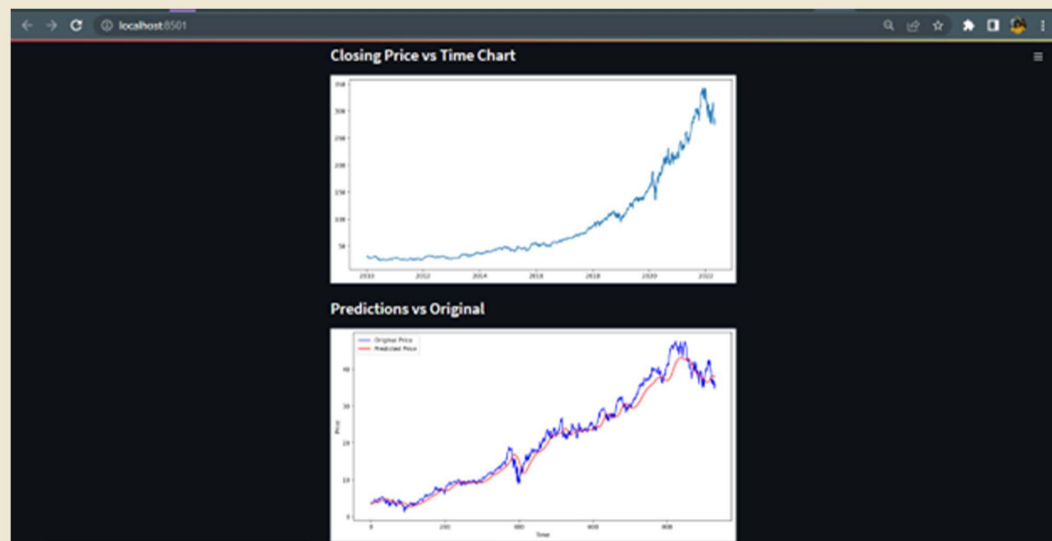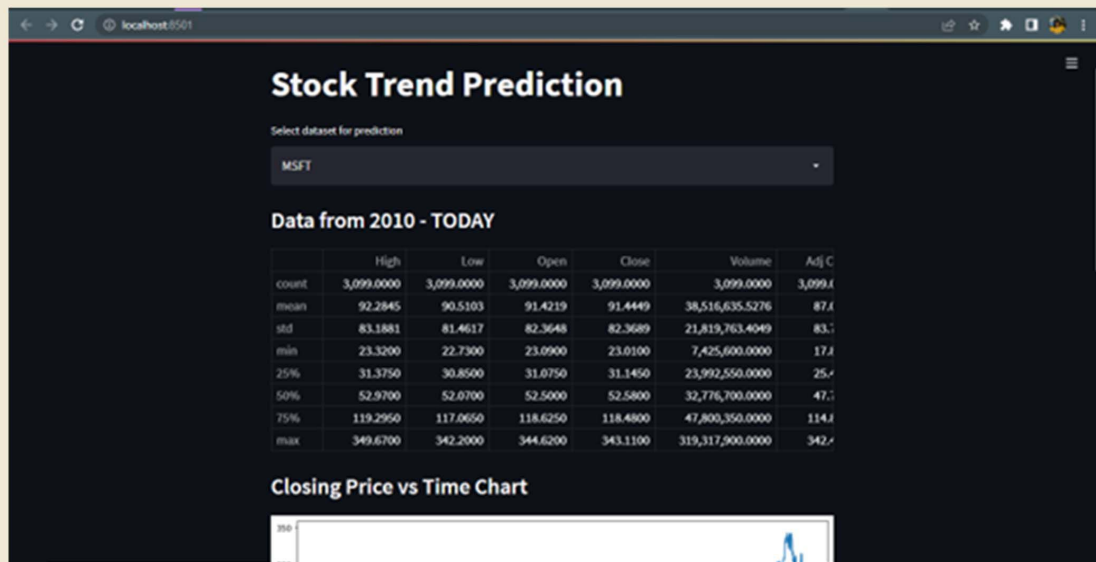
Group Members: Prajnadipta Kundu, Susmita Kar,
Saunak Dasgupta, Abhirup Tapadar.

PLACEMENT DATA: PASSOUT BATCH 2021

Total Students: 119

Eligible Students: 91

Total No of Opportunies: 124

Percentage on Total Opportunities: 136.26%

Net Placed: 78

Percentage on Net Placed: 85.71%

TECHNICAL FACTS

TECHNICAL FACTS

Ninety percent of the text messages received are read within the three minutes of being delivered.

It has been 40 years since the world's first call on mobile phone successfully took place.

TECHNICAL FACTS

At 3:15 pm on the day in which Michael Jackson died Twitter, Wikipedia, and AOL IM all crashed.

An American e-commerce and cloud computing company Amazon.com was earlier known as Cadara.com

TECHNICAL FACTS

World's first 1 GB hard drive
was announced by IBM in
1980. Its price was of $40, 000!

In general, people read as much as
10% slower from a
screen than from thepaper.

TECHNICAL FACTS

1, 000 Computers are used by a single Google query in 0.2 seconds to retrieve an answer.

CROSSWORD

Hardware and Software
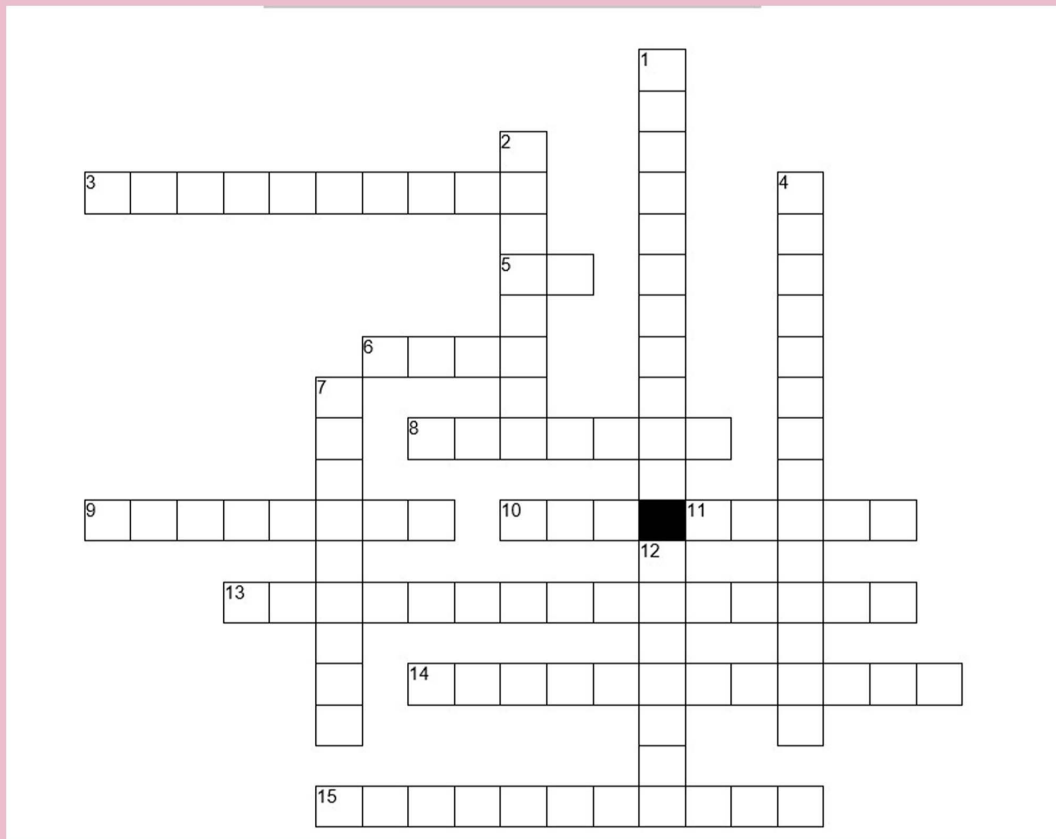
Across

3. Application that is used to access and view web pages on the internet
5. The storage capacity of every hard disk is measured in
6. Unprocessed items
8. The first basic 'screen' that a user sees when a computer is switched on
9. The parts of the computer that you can touch
10. The hardware component that does all the calculations and processing
11. Data and instructions given to a computer
13. The program that maintains all security on a computer
14. The fastest type of printer
15. The result of the computer's processing

Down

1. A situation where one would drag the mouse
2. Sets of of instructions that tell a computer what to do
4. The term used to describe using computers in a way that is sensitive to the environment
7. This key lets you cancel options or choices
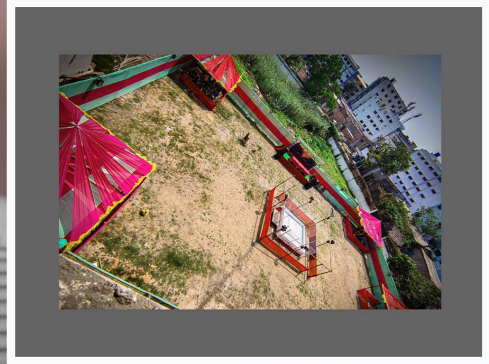12. Printers usually connect to a computer via a

Answers

A crossword puzzle with the following answers:

Across:
- 3. WEB BROWSER
- 5. GB
- 6. DATA
- 8. DESKTOP
- 9. HARDWARE
- 10. CPU
- 11. INPUT
- 13. OPERATING SYSTEM
- 14. LASER PRINTER
- 15. INFORMATION

Down:
- 1. DRAG AND DROP
- 2. PROGRAM
- 4. GREEN COMPUTING
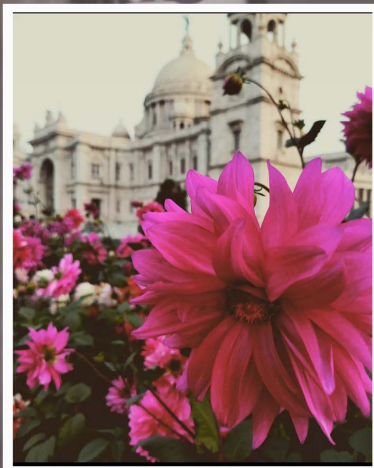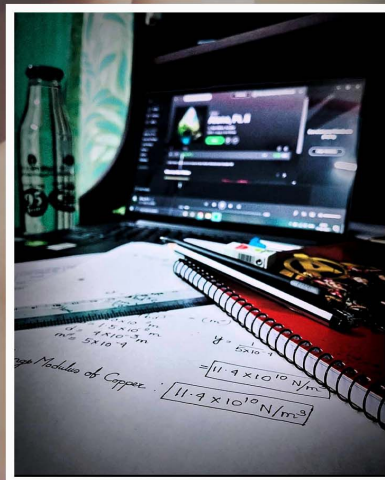- 7. ESCAPE KEY
- 12. USB
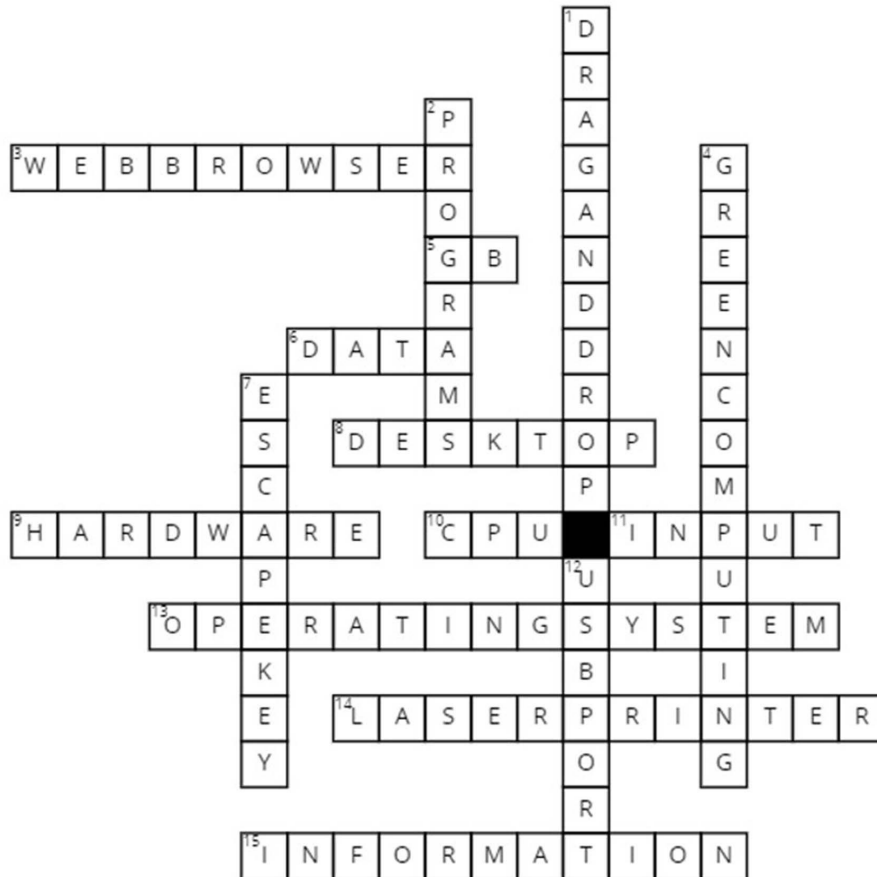
PHOTOGRAPHY

ANIRUDDHA CHANDA IT2020004
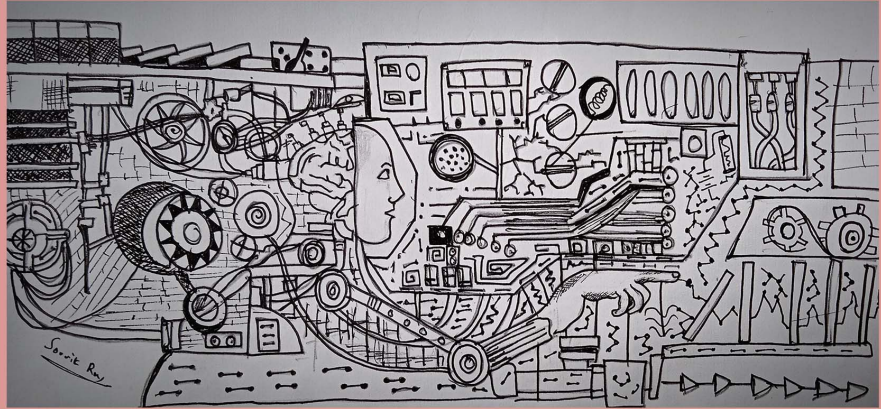

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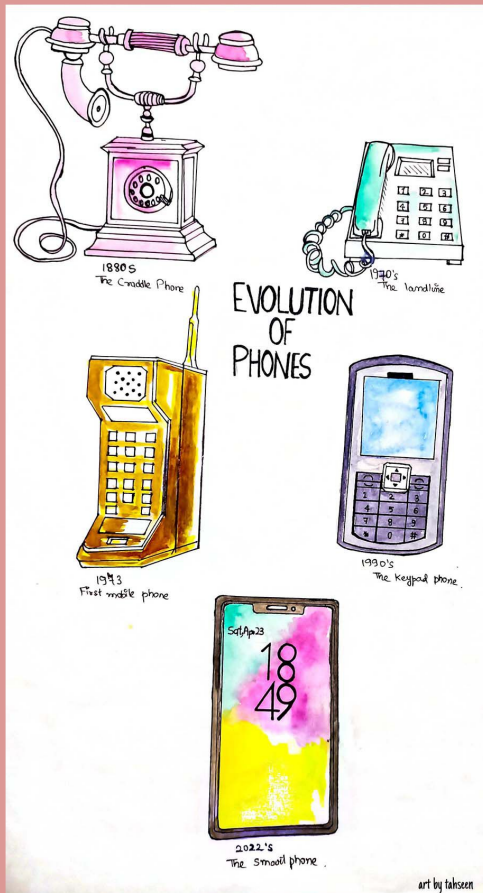DEBASMITA JANA

SAIKAT PANDEY IT2020019

DEBASMITA JANA

ART

SOUVIK ROY IT2020/025

TAHSEEN KHATOON
IT2021/B09

IT Department

Designed by Upasana Pan, IT2020/016
Co-ordinated by Sourav Chakraborty, IT2019/014