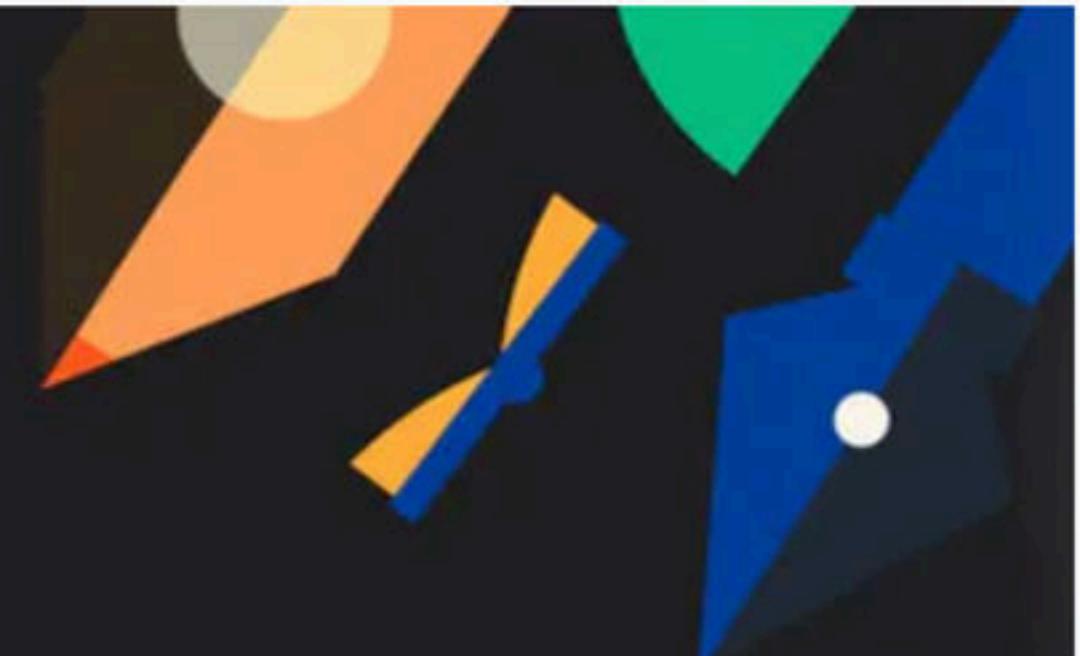


- Recursion
 - Linking
- 
- Decidability ($\vdash \theta()$)
 - Calculus
- 



The Resume that got me into Google (SDE Resume building)

Special class

JAY BANSAL

Expert in GATE CSE &
Competitive Programming



Software Engineer @ Google

AIR 2 - GATE CSE 2019

AIR 39 - ACM ICPC 2019

M.Tech IIT Bombay (CPI - 9.93)

B.Tech Gold Medalist

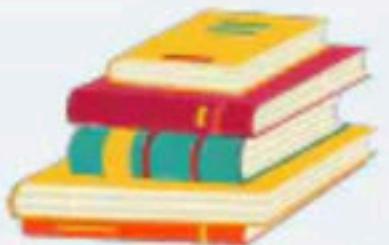
Subjects Taken:

Discrete Mathematics

Engineering Maths

Data Structures | Algorithms

C++ | Python



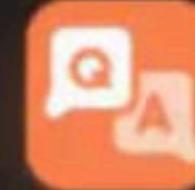
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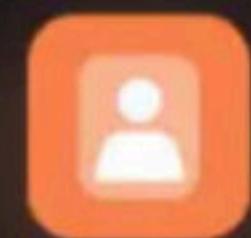
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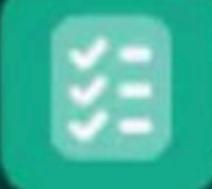
RIB



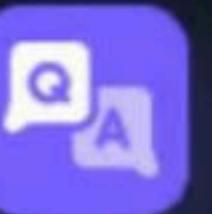
Live Classes



Crash Courses



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18 months	₹2,065 /mo	₹36,975
12 months	₹2,434 /mo	₹29,208
6 months	₹3,998 /mo	₹23,988
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12 months	₹4,234 /mo	₹50,808
6 months	₹6,374 /mo	₹31,870

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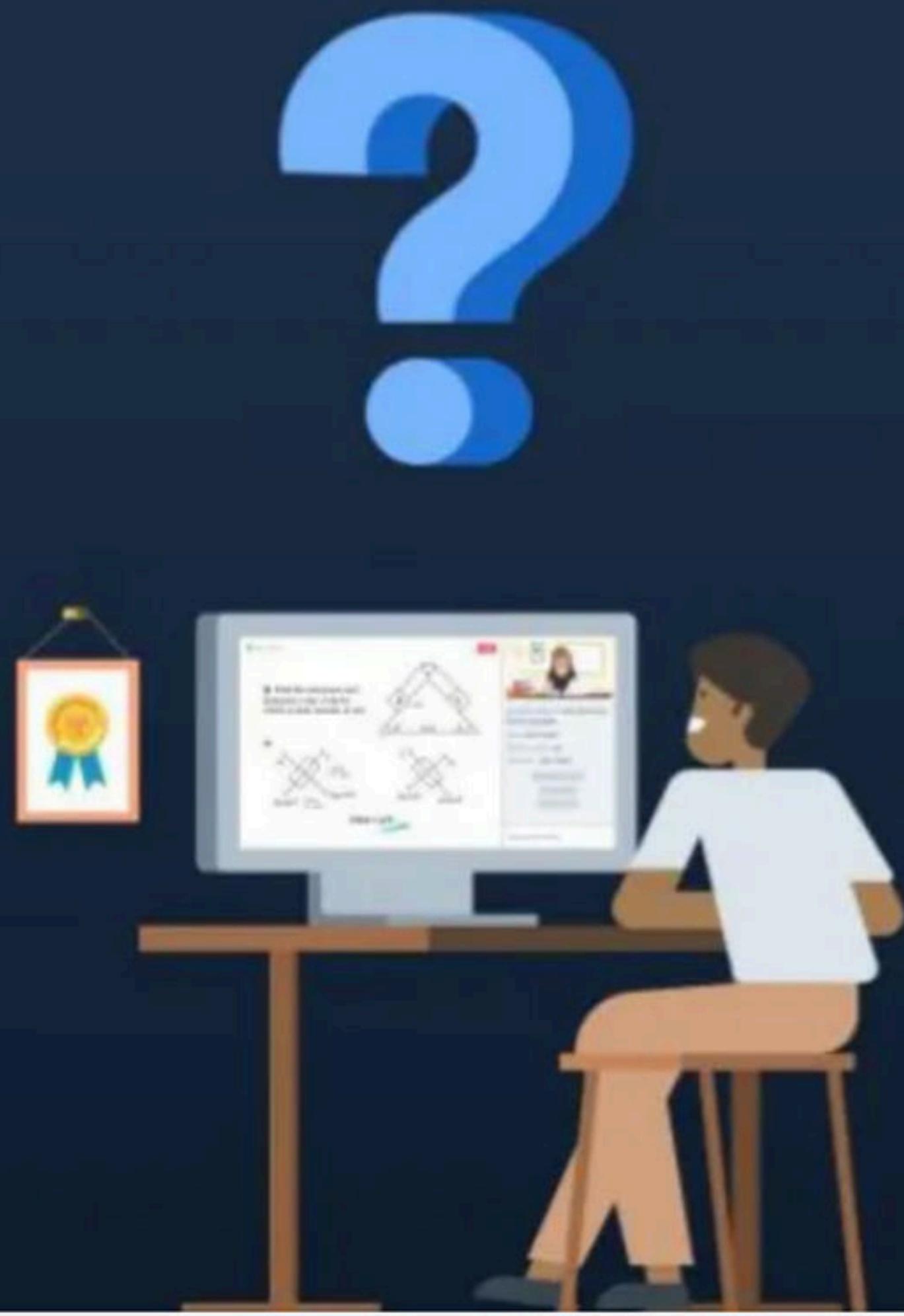
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What You Save	₹6,300 (28%)

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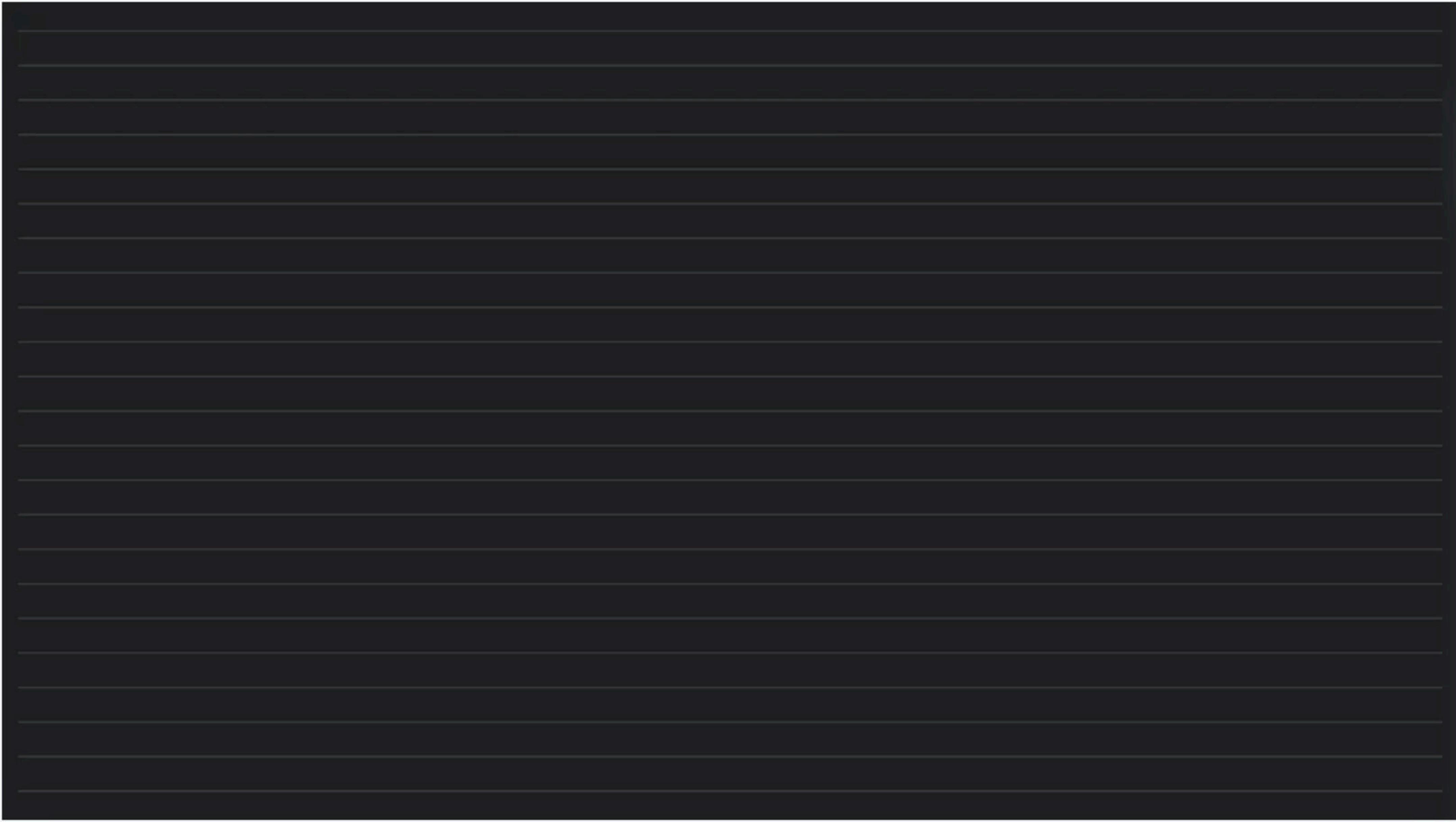
7:00 AM

START DATE

20 OCT 21

GET 10% OFF

USE CODE
JAYCP



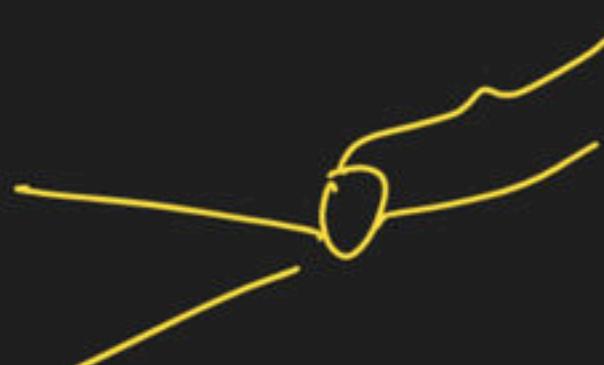
Tips

ATS
=

SDE - 1 page

- The Technical CV should either be of 1 Page or of 2 Pages.
- The Non-Technical CV should be of 1 Page Only.
- The CV shouldn't have more than 750 words and no less than 500 words. X
- The page format should be as plain as possible without watermark. ✓
- The Margin shouldn't be less than the 'Narrow' Margin (0.5" on all sides) as provided by Windows Microsoft Margin option.
- Font Size: Shouldn't be less than 9 for the content X
- Font Size for italics used for references as ** : Shouldn't be less than 6 X
- ✓ Font Type: Normal, Bold: for regular use; Italics: only for 'year' information or ** (that too is optional)
- Preferred Fonts: Times New Roman, Garamond, Tahoma, Verdana, Book Antiqua, Courier New, Calibri, Cambria, Palatino Linotype, Arial ✓
- Use only one 'Font' in the complete CV. You can use bold to emphasize some of the words but the 'Font' shouldn't change in your entire CV.
- Font Color: Strictly Black ✓

Tech - 2 pages
Non Tech - 1 page

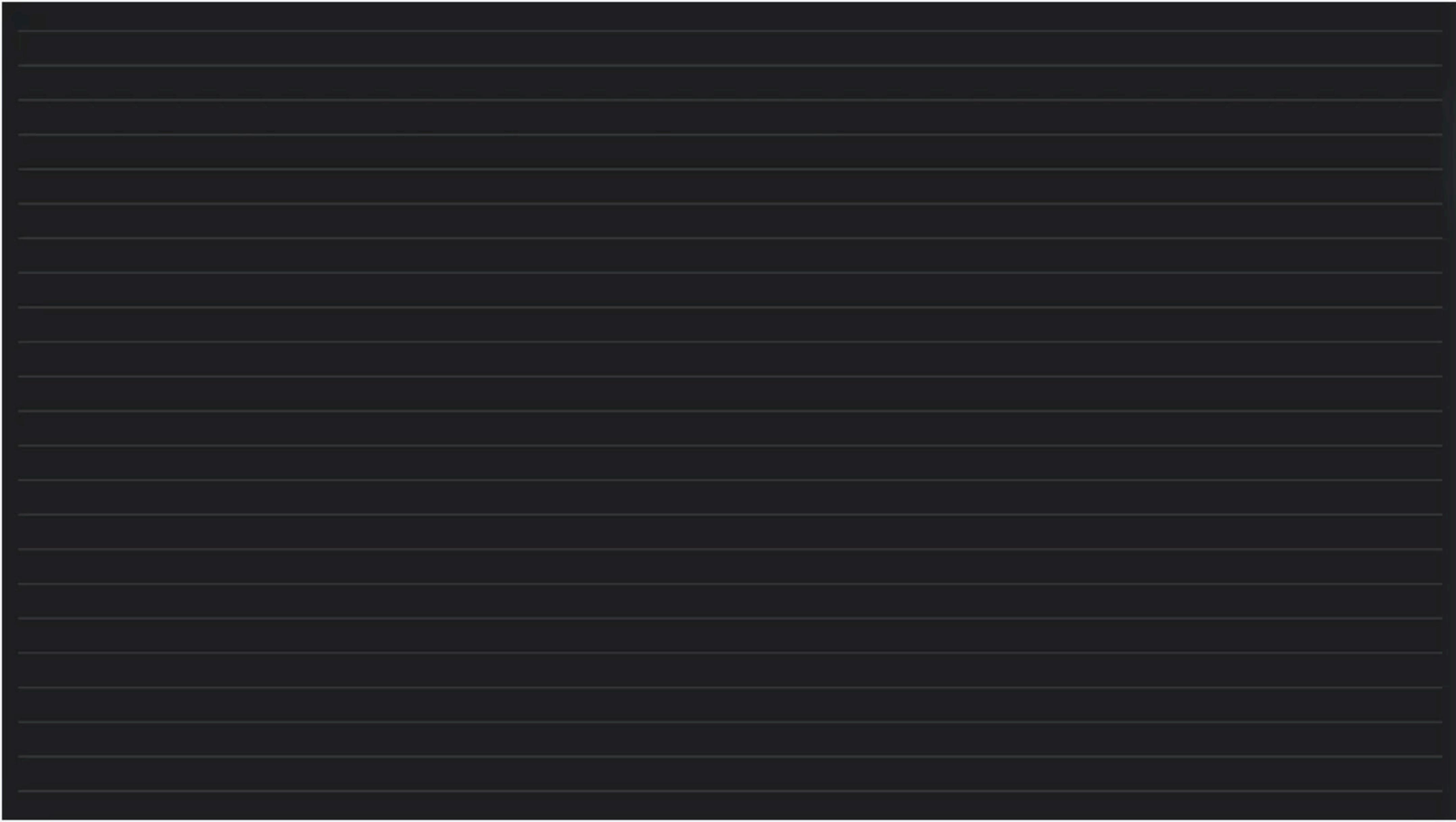


Tips

- The Heads and your name should have TITLE CASE style. 
- The possible headings are: (Though the list is quite exhaustive, a few outliers would be accepted based upon discretion; Also you can skip the heads which are not relevant as per your CV)
 - Education/ Educational Details/ Academic Qualification/ Academic Details/ Academic Performance 
 - Academic Achievements/ Curricular Achievements/ Scholastic Achievements/ Academic Excellence 
 - Co-curricular Activities/ Co-curricular Achievements 
 - Awards/ Honors/ Achievements/ Rewards 
 - Other Achievements
 - Research Paper/ Paper Publication/ Term Papers/ Publications/ Patents
 - B Tech Project/ M Tech Thesis
 - Projects/ Key Projects/ Relevant Projects/ Live Project Experience/ Key Academic Projects/ Technical Projects
 - Summer Internship/ Internships/ Professional Experience/ Industry Internships
 - Work Experience/ Industry Experience/ Entrepreneurship Experience/ Social Entrepreneurship
 - Initiatives Taken/ On-Campus Initiatives/ Social Initiatives/ Sports Initiatives/ Organizational Initiatives/ Cultural Initiatives/ Creative Initiatives/ Strategic Initiatives
 - Other Initiatives
 - Positions Of Responsibility/ Leadership/ Team Building Activities
 - Extra-Curricular Activities/ Extra-Curricular Achievements
 - Relevant Courses/ Important Courses/ Finance Courses/ Management Courses/ Operational Courses/ Professional Courses/ Programming Courses
 - Technical Skills/ Relevant Tools/ Relevant Skills
 - Interests and Hobbies
 - References

Tips

- 'Education' Head:
 - The content should be tabular form Only
 - The first column of the year should be 'year' information
 - The content in the table should be in reverse chronological order
- Any 'Achievements' or 'Activities':
 - Definitely mention the year of Activity or Achievement
- 'Publication':
 - Mention the Full name of Journal with its Issue of Publishing if the paper is published; if it is under review, mention the Full name of Journal for which the publication is submitted
- 'Internships' or 'Work Experience':
 - Write proper date (or, Month) of start and end of the experience as mentioned in the certificate or reference provided to you
- 'Positions of Responsibility':
 - Please write authentic figures Only as per communicated by the Festival Coordinator or Festival Report or any other valid authority or document



Intern Experience

Indian Institute of Technology Kharagpur ✓

Mentor: Prof. Indranil Sengupta ✓

{ Research Intern
Jun - Jul 2018

- Secured e-Voting using Blockchain Technology: Developed and implemented a blockchain-based solution for securely digitizing the voting process.
- The votes published in the blockchain were observable by everyone resulting in a tamper-proof ballot system.

MBM Engineering College, Jodhpur

Mentor: Prof. Alok Singh Gahlot

{ Robotics and IoT Internship
Jun - Jul 2017

- ✓ Mentored around 200 students in a 2 month robotics workshop conducted by Embedded Systems and Robotics Club
- Worked on various robotics and IoT projects such as quadcopter, self balancing bot, PID, home automation, etc.

Publication

- **Best Paper** and **Young researcher** awards for paper “Towards Developing a Secure and Robust Solution for E-Voting using Blockchain” In: 2019 International Conference on Nascent Technologies in Engineering, IEEE ✓

Thesis Project and Seminar ✓

Semi-supervised methods of abnormality detection in medical images

Mentor: Prof. Suyash Awate & Sunita Sarawagi

- Exploring and improving the semi-supervised methods of abnormality detection in medical images
- Working on weakly and semi-supervised learning of a DCNs for semantic image segmentation in medical images
- Evaluating the proposed methods on all existing baselines for few-shot and semi-supervised settings

M.Tech Project

Jul 2020 - Present

High level supervision for medical images

Mentor: Prof. Sunita Sarawagi & Suyash Awate

- Literature survey on existing approaches of automatic generation of medical imaging reports
- Read about currently existing work on Scene graphs and Visual feature extraction, Real-time object detection and GAN-based synthetic brain MR Image generation
- Surveyed some few-shot supervision techniques in general and medical image domain

Seminar

Jan - Jul 2020

QR Code Protocols for Offline File Transfer

Mentor: Prof. Abhisek Gour

- Created an Android app to transfer small images by scanning dynamically generated gif of QR images at 24 FPS
- Designed our own protocols for image sharing using QR images such as adding a header to QR frames

B.Tech Project

Jun - Jul 2019

Brain Computer Interface

Mentor: Prof. Alok Singh Gahlot

- Studied working of BCIs and recent works on human and animal BCIs
- Surveyed a variety of case studies such as monkey operated robotic arm and brain to brain communication

Seminar

Jan - Jul 2018

Position of Responsibility ✓

CSE Department Placement Coordinator

Jul 2020 - Present

- Created/Curated coding tests on HackerRank and CodeChef for the final year batch to help them in placements
- Organized multiple sessions to resolve queries regarding programming or placement activities

Student Companion - Institute Student Companion Program (ISCP)

Jul 2020 - Present

- Mentoring 8 students throughout the year helping them on academic and non-academic fronts

Administration Secretary - Innovation & Programming Club

Aug 2018 - Jul 2019

- Encouraged peer tutoring, mentored students and took classes of C/C++/Python and Competitive programming

Teaching Assistantship

July 2019 - Present

- **CS 736:** Algorithms for Medical Image Processing under Prof. Suyash Awate in Spring semester, 2021
- **CS 215:** Data Analysis and Interpretation under Prof. Ajit Rajwade & Suyash Awate in Autumn semester, 2020
- **CS 218:** Design and Analysis of Algorithms under Prof. Nutan Limaye in Spring semester, 2020
- **CS 101:** Computer Programming & Utilization under Prof. Purushottam Kulkarni in Autumn semester, 2019

LaTeX ✕

Academic Projects

Automatic CTR Ratio calculation using CXR Images

Prof. Suyash Awate, Spring 2020

- Segmented chest X-ray images to calculate cardiothoracic ratio and detecting cardiomegaly
- Used UNet architecture for segmentation and shape analysis, geometry and slopes for other heart parameters
- Achieved **79.4% acceptance rate** in practical settings which is **2.90% better than the existing SOTA method**

Intelligent test Interface with Plagiarism detection

Prof. Kavi Arya, Autumn 2019

- Designed and implemented efficient algorithm for plagiarism detection between each pair of submitted responses
- Implemented LCS, Levenshtein distance and Shingle (N-gram) based algorithms such as Q-gram, cosine similarity and Jaccard index, also designed our own word-based Jaccard algorithm which showed better results

Pneumonia Chest X-ray Image Classifier

Prof. Sunita Sarawagi, Autumn 2019

- Designed a neural network based binary classifier which detects pneumonia from chest x-ray images
- Analyzed the effect of kernel size, layers, dilation rate, pooling, size of image on accuracy
- Achieved an **accuracy of 91.185 %** using ensembling best performing model 6 times to generate predictions

Spatio-Temporal Indexing

Prof. S. Sudarshan, Autumn 2019

- Created a spatio-temporal index on geographic data such as points or regions with an extra valid-time dimension
- Used Postgres spatial datatypes and the existing R-tree implementation in PostgreSQL underneath with certain modification, by adding specific `valid_from` and `valid_till` fields.

Multi-snake game using Multi Agent Reinforcement Learning

Prof. Shivaram K., Autumn 2019

- Formulated the two-snake version of the classic snake game as a Markov zero-sum game
- Trained each snake using minimax Deep Q-Network in a multi agent reinforcement learning setting

Logistics & Home Delivery Support System

Prof. Abhisek Gour, Autumn 2018

- Worked on the Software Engineering aspect of the project which was to ease the logistics & Home delivery system
- Built the detailed SRS report, Use Case models, State (Flow) charts, activity, sequence and data flow diagrams and performed the cost analysis using COCOMO Estimation Model for this project

Scholastic Achievements

- With score of 1000, secured **All India Rank 2** in GATE CS 2019 among 99,932 candidates
- Department **Gold medalist** in B.E Computer Science, with CPI of 9.02
- Department **rank 1** among all M.Tech CSE TA program candidates
- Secured **All India Rank 39** in ACM-ICPC online round 2018 and went to Amritapuri regionals
- In NPTEL Massive open online courses, secured: **AIR 1** in Computer Architecture (IIT Kharagpur), **AIR 3** in Discrete Structures (IIT Ropar) and **AIR 7** in Algorithms course (IIT Kharagpur)
- Regional 100%ile** in CoCubes and national 99.9%ile in Computer programming and Quantitative Ability in AMCAT employability assessments

Technical Skills

Programming Languages & Tools

C, C++, Python, APL, MATLAB, Git, L^AT_EX

overlooked

Limited Exposure

Java, R, HTML, CSS, Bash, Django, cmake, PostgreSQL, OpenGL

Extra curricular

- Selected for and attended **Google Research India AI Summer School**, August 2020
- Won the Line Seguidor Event in Ignus 2017 at IIT Jodhpur and went to finals at Techfest 2017, IIT Bombay
- Won the technical cover creator, face painting and quilling events in Ignus 2016-19 conducted by IIT Jodhpur
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splitting

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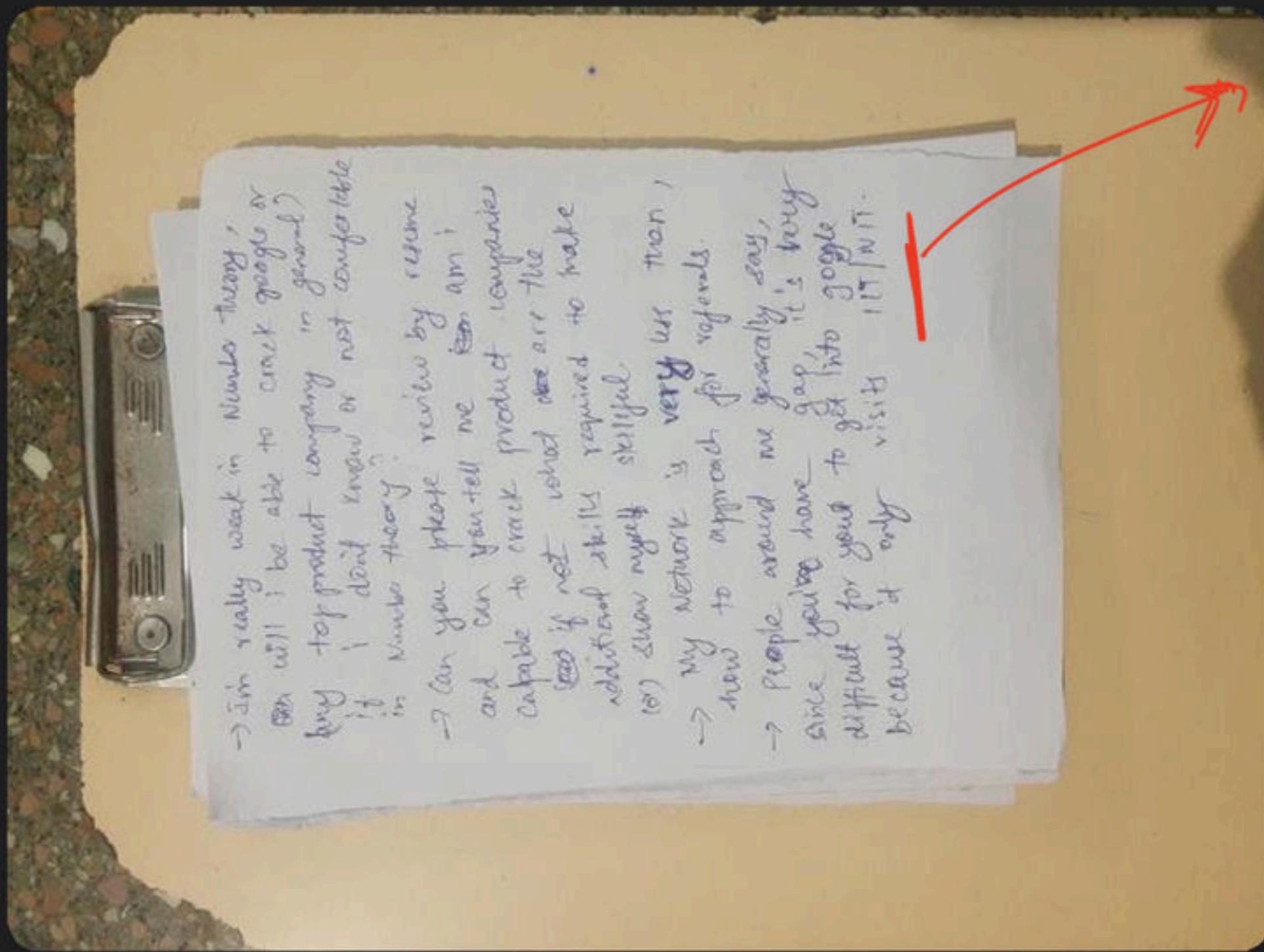
Hobbies

Competitive Programming, Badminton, Chess, Table Tennis

1.8

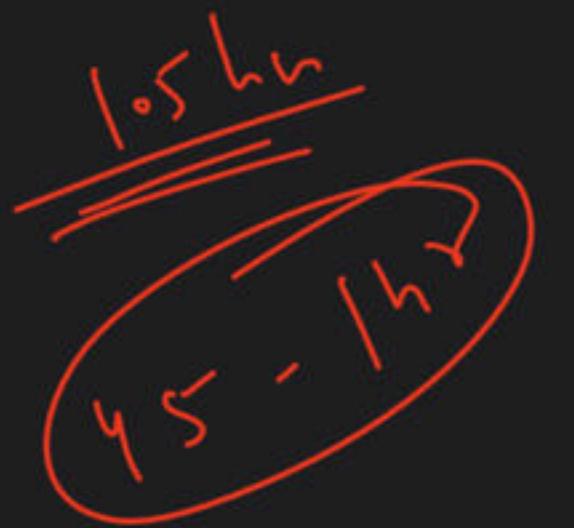
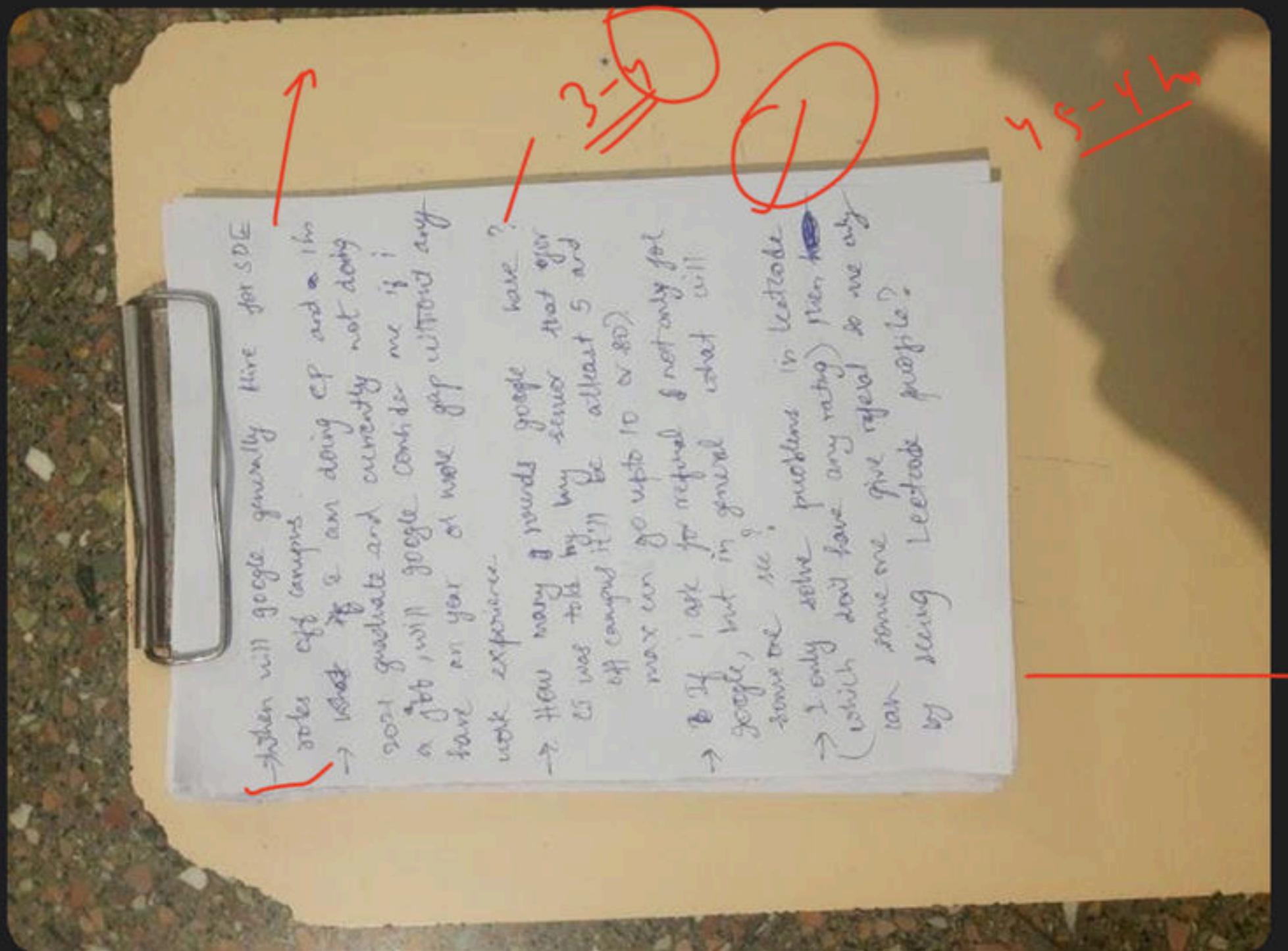
▲ 1 • Asked by Srikant

Please help me with this doubt



▲ 1 • Asked by Srikant

Please help me with this doubt



JAY BANSAL

Software Engineer @ Google

Educator @ Unacademy

MTech CSE @ IIT Bombay

[✉ jaybansal@cse.iitb.ac.in](mailto:jaybansal@cse.iitb.ac.in)
[GitHub](https://github.com/Jay99bansal)
[CSE IITB](http://www.cse.iitb.ac.in/~jaybansal/)

[H15-B/613, IIT Bombay, Mumbai, 400076](#)
[LinkedIn](http://linkedin.com/in/jay-bansal-7aa584136)



EDUCATION

Indian Institute of Technology Bombay

M.Tech Computer Science

[Aug 2019 - Present](#) [Mumbai](#)
CPI - 9.90/10 (Department Rank - 1)

M.B.M. Engineering College

B.E. Computer Science

[Aug 2015 - Jun 2019](#) [Jodhpur](#)
CPI - 9.02/10 (Gold medalist)

INTERNSHIPS

Indian Institute of Technology Kharagpur

Research Intern

[Jun 2018 - July 2018](#) [Kharagpur, WB](#)

Research Intern at IIT Kharagpur under Prof. Indranil Sengupta. Worked on "Blockchain Technology" developed a blockchain based solution for securely digitizing online voting process.

M.B.M. Engineering College

Robotics Internship

[Jun 2017 - July 2017](#) [Jodhpur](#)

Mentored a 2 month robotics workshop conducted by ESRC, worked on various robotics projects viz. Quadcopter, self balancing bot, PID etc.

MAJOR PROJECTS

Semi-supervised methods of abnormality detection in medical images: Exploring and improving the semi-supervised methods of abnormality detection in medical images.

Automatic Cardiothoracic Ratio Calculation With Deep Learning: segmented Chest X-Ray images and automatic calculation of CTR using deep learning.

Chest X-rays Image Classifier based on Pneumonia: proposed ensembling based CNN trained from scratch to classify and detect the presence of pneumonia from a collection of chest X-ray image samples.

Playing Multi snake using Reinforcement Learning : extended the RL snake game setup to a two-player environment, modelled it as a zero-sum game, used Minimax-DQN to find the optimal policies for each snake.

Secured e-Voting using Blockchain Technology: Developed a blockchain based solution for securely digitizing the online voting process.

Intelligent test interface with plagiarism detection: built an efficient algorithm which performs optimal plagiarism detection task on the given set of test responses.

QR Code Protocols for Offline File Transfer: created Android app to send images from one device to other by scanning dynamically generated gif of QR images at a fixed frame rate of 24 FPS.

SCHOLASTIC ACHIEVEMENTS

- Secured All India Rank 2 in GATE CS 2019 among 100 thousand candidates.
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AIR 1 in Computer Architecture, AIR 3 in Discrete Structures and AIR 7 in Algorithms course

EXTRA CURRICULAR

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- Won the Line Seguidor Event in Ignus 2017 at IIT Jodhpur and was among top 25 teams at Techfest 2017, IIT Bombay.

PUBLICATIONS

Best Paper and Young researcher awards for "Towards Developing a Secure and Robust Solution for E-Voting using Blockchain" In: 2019 International Conference on Nascent Technologies in Engineering (ICNTE), IEEE

PROGRAMMING

C C++ Python R Matlab
LaTeX Java HTML CSS

POSITION OF RESPONSIBILITY

- Department Placement Coordinator of CSE, IIT Bombay for year 2020-21
- Student Companion for Batch 2020-22 under ISCP, IIT Bombay.
- Administration Secretary of Innovation & Programming Club, MBM Jodhpur.

Teaching Assistant

IIT Bombay

- [2019-20](#) [Mumbai](#)
- CS 101: Computer Programming and Utilization under Prof. Puru Kulkarni
 - CS 218: Design and Analysis of Algorithms under Prof. Nutan Limaye
 - CS 215: Data Analysis and Interpretation under Prof. Ajit Rajwade & Suyash Awate

HOBBIES

Badminton Chess Programming

JAY BANSAL

Software Engineer @ Google

Educator @ Unacademy

MTech CSE @ IIT Bombay

@ jaybansal@cse.iitb.ac.in

Github: <https://github.com/jay99bansal>

Personal Website: www.cse.iitb.ac.in/~jaybansal/

H15-B/613, IIT Bombay, Mumbai, 400076

LinkedIn: <http://linkedin.com/in/jay-bansal-7aa584136>



EDUCATION

Indian Institute of Technology Bombay

M.Tech Computer Science

Aug 2019 - Present ✓

Mumbai

CPI - 9.90/10 (Department Rank - 1)

M.B.M. Engineering College

B.E. Computer Science

Aug 2015 - Jun 2019 ✓

Jodhpur

CPI - 9.02/10 (Gold medalist)



SCHOLASTIC ACHIEVEMENTS

- Secured All India Rank 2 in GATE CS 2019 among 100 thousand candidates.
- In NPTEL MOOC courses, secured:
AIR 1 in Computer Architecture, AIR 3 in Discrete Structures and AIR 7 in Algorithms course

EXTRA CURRICULAR

Secured AIR 20 in ACM ICPC online round

INTERNSHIPS

Indian Institute of Technology Kharagpur

Research Intern

Jun 2018 – July 2018

Kharagpur, WB

Research Intern at IIT Kharagpur under Prof. Indranil Sengupta. Worked on “Blockchain Technology” developed a blockchain based solution for securely digitizing online voting process.

M.B.M. Engineering College

Robotics Internship

Jun 2017 – July 2017

Jodhpur

Mentored a 2 month robotics workshop conducted by ESRC, worked on various robotics projects viz. Quadcopter, self balancing bot, PID etc.

MAJOR PROJECTS

2018 and went to Amritapuri regionals.

- Won the Line Seguidor Event in Ignus 2017 at IIT Jodhpur and was among top 25 teams at Techfest 2017, IIT Bombay.

PUBLICATIONS

Best Paper and Young researcher awards for “Towards Developing a Secure and Robust Solution for E-Voting using Blockchain” In: 2019 International Conference on Nascent Technologies in Engineering (ICNTE), IEEE

PROGRAMMING

C

C++

Python

R

Matlab

L^AT_EX

Java

HTML

CSS

MAJOR PROJECTS

LaTeX Java HTML CSS

Semi-supervised methods of abnormality detection in medical images:

Exploring and improving the semi-supervised methods of abnormality detection in medical images.

Automatic Cardiothoracic Ratio Calculation With Deep Learning: segmented Chest X-Ray images and automatic calculation of CTR using deep learning.

Chest X-rays Image Classifier based on Pneumonia: proposed ensembling based CNN trained from scratch to classify and detect the presence of pneumonia from a collection of chest X-ray image samples.

Playing Multi snake using Reinforcement Learning : extended the RL snake game setup to a two-player environment, modelled it as a zero-sum game, used Minimax-DQN to find the optimal policies for each snake.

Secured e-Voting using Blockchain Technology: Developed a blockchain based solution for securely digitizing the online voting process.

Intelligent test interface with plagiarism detection: built an efficient algorithm which performs optimal plagiarism detection task on the given set of test responses.

QR Code Protocols for Offline File Transfer: created Android app to send images from one device to other by scanning dynamically generated gif of QR images at a fixed frame rate of 24 FPS.

POSITION OF RESPONSIBILITY

- Department Placement Coordinator of CSE, IIT Bombay for year 2020-21
- Student Companion for Batch 2020-22 under ISCP, IIT Bombay.
- Administration Secretary of Innovation & Programming Club, MBM Jodhpur.

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📅 2019-20

📍 Mumbai

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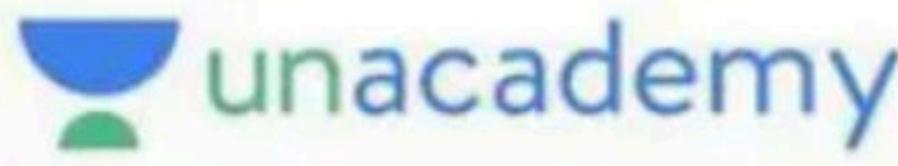
HOBBIES

Badminton Chess Programming

Questions?



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RAISE A HAND



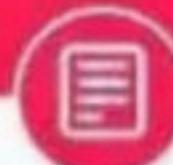
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& Aptitude Skills



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Soft Skills &
Interview Guidance

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HCL Free Test Series
Every Friday (5:00 PM)

Note - *Deloitte Mock Test Series is Available for Plus Subscribers only.

Analysis classes on every Sunday for Deloitte Test Series

Quant & DILR



Ravi Prakash Udit Saini

Programming



Sanket Singh Sonia Motwani

DS, CN, OS & DM



Sweta Kumari Sanchit Jain

Verbal



Sameer Ahmad Shabana

New Batches
Every Wednesday

Hall Of Fame Batch

Prepare for Dream Companies such
as Deloitte, Samsung, EY etc.

Achievers Batch

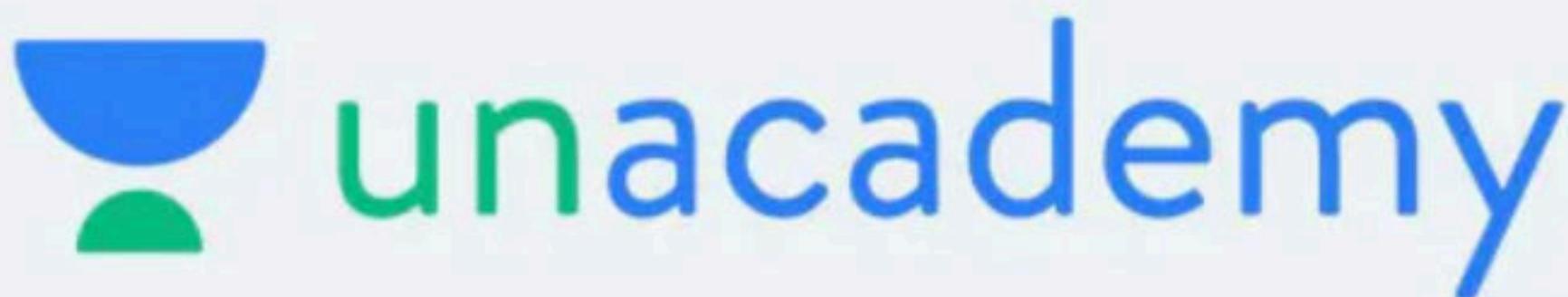
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