EXCEL. EXCEED. LEAD.

A 4-YEAR UNDERGRADUATE PROGRAMME IN COMPUTER SCIENCE
Software is eating the world. Powered by tech, the world as we know is changing. And software engineers are driving this change. The need for skilled software engineers is increasing by the day.

Limited by an outdated curriculum and crippled by rote learning, 90% of tech graduates today are not adept at handling new-age skills like Artificial Intelligence, Machine Learning, Data Engineering, and more.

Using past learnings and stellar outcomes as a structure, we have launched the next revolution in undergraduate education – Scaler School of Technology. Built for the Industry, by the Industry; it aims to develop and nurture tech talent to transform the tech industry, one batch at a time.
Our vision with this 4-Year residential programme is to bridge the evident gap between the Tech Industry and Tech Education. With tech experts as instructors, mentors, and batch success managers, we will ensure that no student is left behind. **The same vision has been echoed by many CTOs and industry leaders, including NITI AAYOG’s former CEO, Amitabh Kant.**

“Today, where even top-tier institutes like IITs are running old syllabi, Scaler does the job of producing high-quality engineers.”

Amitabh Kant, Ex-CEO, NITI Aayog, Govt. of India

From my experience of building Facebook Messenger, setting up Facebook’s London office, and interviewing 500+ candidates from multiple countries, I can confidently state that this innovative structure is the first-of-its-kind in the world to be implemented at the graduate level.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Future of Tech Learning</td>
<td>04</td>
</tr>
<tr>
<td>UG Programme in a Snapshot</td>
<td>05</td>
</tr>
<tr>
<td>Scaler’s Stellar Outcomes</td>
<td>06</td>
</tr>
<tr>
<td>Degree &amp; Certification</td>
<td>08</td>
</tr>
<tr>
<td>Curriculum Outline</td>
<td>10</td>
</tr>
<tr>
<td>Learn by Doing Pedagogy</td>
<td>13</td>
</tr>
<tr>
<td>Teaching &amp; Career Support</td>
<td>14</td>
</tr>
<tr>
<td>Placement Assistance</td>
<td>19</td>
</tr>
<tr>
<td>Campus Life</td>
<td>21</td>
</tr>
<tr>
<td>Tech Education Reimagined</td>
<td>23</td>
</tr>
<tr>
<td>Eligibility &amp; Admissions</td>
<td>25</td>
</tr>
<tr>
<td>Fee &amp; Scholarships</td>
<td>27</td>
</tr>
<tr>
<td>Learner Testimonials</td>
<td>29</td>
</tr>
<tr>
<td>Curriculum Deep-dive</td>
<td>33</td>
</tr>
</tbody>
</table>
Preparing for the Future: Computer Science

According to estimates from Coursera, in the next 10 years, there will be 9 crore new jobs in software engineering alone. Every year 10 lakh students apply for CS at top IITs, but only 500 seats are available. Which means only 0.05% of the total applicants make the cut.

16 lakh students graduate as engineers, each year

- of which, only 16% find a job,
- out of those, 80% are CSE jobs
- and only 2% earn more than 8 LPA.

High-quality software engineers are in very high demand and will continue to be. Unfortunately, the current curriculum is not enough to get a job, let alone make a career. We feel that India is the youth capital of the world and for our growth, this needs to be fixed.
Introducing Scaler School of Technology

The first-of-its-kind 4-Year Programme in Computer Science that preserves and upholds the Skills-with-Degree culture. This is to help our learners break away from the rat-race culture of conventional education and scale ahead in the tech industry through:

- A Bachelor’s and Master’s Programme delivered by 100+ tech leaders from Google, Microsoft, Uber etc.
- A curriculum that enables every student to graduate with more than a year of industry experience.
- A team of veterans who help build future tech leaders with skills at par with a Sr. Engineer / SDE- II in the industry.

4 Years UG Programme with 1-Year paid internship

Eligibility
Class 12th pass-outs and current students

Fully Residential
In the vicinity of top tech companies in Bangalore

Selective Admission
Looking for 200 outstanding individuals
Expertise that Delivers: Scaler’s Proven Track Record

Our Alumni Work at*

Google  Amazon  Adobe  PayPal  Microsoft  Target  & 900 more

₹ 900 CR  Salary created for Scaler graduates in the last 4 yrs

Amazon  Hired more Scaler graduates than all the IITs combined

3700+  Learners placed at top tech companies

₹ 1.7 CR  Highest salary, 21.6 LPA

average salary of learners

*Verified by KPMG, the data is explicitly from Scaler’s working professional course

Supported & Mentored By India’s Top Tech Leaders

Rajan Anandan  Ex-VP SEA, Google

Binny Bansal  Co-Founder, Flipkart

Deepinder Goyal  Co-Founder, Zomato

Apurva Dalal  Engineering Lead Ex-Twitter

Kunal Shah  Co-Founder, CRED

Amrish Rau  CEO, Pine Labs

Prasanna Sankar  Co-Founder, Rippling

Jacob Singh  Ex-CTO, Blinkit

and 100+ more Industry Leaders
Scaler School of Technology

Founded on 6 Pillars of Holistic Education

Future-Proof Curriculum
A holistic curriculum designed by top tech experts

Learn From Top Instructors
Daily classes from instructors who have built FB Messenger, Uber, Hotstar & many more

1:1 Mentorship
Monthly 1:1 career guidance from industry experts to help you succeed

1-Year Paid Tech Internship
Get real-world exposure with a compulsory 1-Year paid internship

100% Placement Assistance
900+ career partners and 100+ recruitment specialists

Learn by Building Products
Build 50+ real-world products that mimic engineering challenges
4 Year Programme with Bachelor’s & Master’s Degree

Scaler School of Technology is envisioned as a programme that reinvents tech education to help Computer Science graduates realise their ultimate goal of working for big technology companies.

Along with a Scaler School of Technology certificate valued by top tech companies, learners will be eligible to apply for a Bachelor's and a Master's degree.

A Professional Certificate by Scaler School of Technology

Bachelor’s of Science in Computer Science by BITS Pilani*
3 Years

Approved training partner of NSDC & recognised by top tech companies

Recognised as Institute of Eminence under UGC

Master’s of Science in Computer Science by WOOLF University **
1 Year

Globally accredited and recognised by ECS and CES

*The Bachelor of Science (B.Sc.) in Computer Science is an online degree programme designed and delivered by BITS Pilani exclusively on Coursera. Admission of a student into the degree programme will be at the sole discretion of BITS Pilani.

**Woolf University - Licensed as a higher education institution in the European Union that works on ECTS - European Credit Transfer System. Master’s degree awarded by Woolf is globally recognised, with recognition from ECE and CES.
Curriculum That Guarantee Outcomes

We developed a comprehensive curriculum based on detailed discussions with the top minds from the industry, while ensuring we do not compromise our academic standards. Our curriculum is crafted to sow strong foundational concepts of Computer Science, gradually elevating students to realise industry’s expectations.

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**PHASE 1**
Initial 1.5 Yrs

**LEARN**
Fundamentals of DSA, Fullstack, Shell, Frontend & work on your Soft Skills

**PHASE 2**
Next 1 Yr

**EXPERIENCE**
A 1-year paid internship at a top tech company & receive a Pre-Placement Offer

**PHASE 3**
Final 1.5 Yrs

**SPECIALISE**
In high demand fields like AI/ML/Algo Trading & bag placement offers from Tech Giants
Phase 1
Learn Fundamentals | Duration: 18 Months

Become a Competitive Programmer
Skills you will learn:
Java Basics | Classes and Objects | Discrete Mathematics | Learn Data Structures and Algorithms | Graph Theory - 1 | Competitive Programming

Build a Web Server with 100k+ Concurrent Requests
Skills you will learn:
Shell Scripting | Memory Management | Processes and Thread | Concurrent Programming | Computer Network | Socket Programming

Build an Online Excel Sheet with 1M+ Rows
Skills you will learn:
HTML / CSS | How Internet Works | Browser Architecture | JavaScript | DOM | Lazy Load | Website Optimisation Techniques | React

Build an eCommerce Website
Skills you will learn:
Databases | SQL | Schema Design | NoSQL & NoSQL Schema Design [Architecture not covered] | Indexing | MVC Frameworks | Get Started with Spring Boot | Get Started with Cloud | Integrate CDNs | Payment Gateway Integration

Implement https & RSA Encryption
Skills you will learn:
Symmetric Key Encryption | Block Cyphers | Public Key Encryption | NP-Hard / NP-Complete Problems | Public-Private Key Encryption
Master Product Roadmaps and Metrics

Skills you will learn:
OKR Framework | Metrics for Acquisition, Activation, Engagement, Retention, Monetisation | Hands-on with Mixpanel / Google Analytics | User Research and Need Discovery / Validation | Case Studies

Analyse Data to Derive Business Decisions

Skills you will learn:
SQL | NumPy, Pandas, Matplotlib, Seaborn | Web Scraping | Probability and Statistics | Case Studies

Phase 2
Gain Real-World Experience | Duration: 12 Months

Pre-Internship: Learn your Company's Tech Stack, Unit Testing, and Documentation

Skills you will learn:
Build a small project on the Tech Stack of the company you'll be joining | How to write Unit Tests | Art of Writing Documentation | Art of Handling Large Codebases | Debugging Tools

12-Month Internship with regular 1:1 Mentorship

Support you will receive:
Monthly / Biweekly check ins from a Personal Mentor | Correction on Hard and Soft Skills as needed | Support Material to help succeed in the role as needed
Phase 3
Specialise | Duration: 18 Months

Learn Project Management

Skills you will learn:
Project Timeline Estimation | Tools like Gantt Charts | Stakeholder Management Basics

Choose any 2 Specialisations

Engineering Leadership Track

Skills you will learn:
Low-Level Design & Design Patterns | System Design of Large Scale Products with Case Studies | Implement Handling Large Data Streams on Cloud | VoIP - Build your own Zoom | Cybersecurity Basics | Data Engineering: Create Data Lakes, Write | Spark / Map Reduce Jobs

MAANG Track

Skills you will learn:
Number Theory | Prob and Stats - 2 | Advance DSA | Advance Graph Theory

Algo Trading Track

Skills you will learn:
System Programming using C/C++ | Multi-Threading and Concurrent Programming - 2 | Advance DSA | Prob and Stats - 2 | Linear Algebra | Stocks and Derivatives - 101 | Quant Research Methods

AI/ML Track

Skills you will learn:
Prob and Stats - 2 | Linear Algebra | Classical ML - Supervised Learning | Classical ML - Unsupervised Learning | Computer Vision | NLP

For a curriculum deep-dive, check out the appendix at the end.
We understand our curriculum won’t be impactful for our learners, if not paired with innovative teaching methods. To do justice to that, we make sure they Learn by Doing!

1. **Integrated Lab Sessions**
   Post every lesson to ensure every class has hands-on components.

2. **Gamified Learning Platform**
   Real-time gamified tracker to keep a track of learners’ growth.

3. **Hackathons**
   Brainstorm in collaboration with our career partners and brace for real-world hackathons like ICPC, GSoC and more.

4. **Fireside Chats**
   Expert sessions by Industry Leaders & top CTOs to get first-hand industry insights.
Teaching Army
Who’ll Go the Extra Mile!

Our learners will be taught and mentored by those who are breaking new ground, have developed scalable systems and products, nurtured unicorns and decacorns, and built a legacy in the tech industry.
Meet Our Instructors

Gain real-world knowledge directly from the tech veterans, who have been there, done that.

Anshuman Singh  
Ex- Facebook  
Built Facebook Messenger

Srikanth Varma  
Ex- Amazon  
Built AI @ Amazon

Naman Bhalla  
Ex- Google  
Worked on Google Ads

Arnav Gupta  
Ex- slice  
Built Zomato App

Shivank Agrawal  
Ex- Microsoft  
Worked on Oracle DB

Prateek Narang  
Ex- Google  
Built Coding Blocks

and 100+ more Tech Veterans as Instructors
Meet Our Mentors

Our team of industry experts will mentor learners, provide end-to-end clarity and help them overcome the uphill battles of tech. They will resolve queries, give interview tips and placement assistance to ensure every learner is on the right track.

Goutham Harsha
Tech Lead @Google
Worked at: Google, Apple & Microsoft

Udit Agarwal
Engineering Leader @Amazon
Worked at Microsoft, Amazon & Adobe

Divya Karia
Software Engineer @Google
Worked on: Google ADs & Google Play

Vinod Kumar
Software Engineer @Meta
Worked at: Microsoft, Amazon & Facebook

and 100+ more Tech Veterans as Mentors
Meet Our Super Mentors

To fuel learning and pour inspiration we'll hold quarterly sessions with Industry Leaders and top CTOs from companies like Google, Uber, Cred and many more.

Rajan Anandan
Ex-VP SEA, Google

Apurva Dalal
Ex-Engineering Leader, Twitter

Jacob Singh
Ex-CTO, Blinkit

Ajey Gore
Operating Partner Tech, Sequoia

Success Managers

Guiding Learners at Every Step

Our Success Managers will go above and beyond to solve any problems and motivate learners to step out of their comfort zone. They'll ensure their group of learners graduate with flying colours.
Placement Assistance at Scaler School of Technology

900+ Career Partners for 200 Learners

Giving learners the choice of a stellar line-up to start their career!

Google  Amazon  Adobe  Microsoft  Target
100% Placement Assistance: Dedicated career support and guidance to help learners land at top tech companies

100+ Career Specialists to ensure personal attention for CV building and interview preparation tips

30K+ Scaler Community to network and connect

Google  amazon  Microsoft  Adobe  MindTickle

Flipkart  Goldman Sachs  Myntra  OLA  media.net

OLX  NUTANIX  Atlassian  Paytm  gojek

Qualcomm  PayPal  OnePlus  UBER  wakefit

toppr  snapdeal  NVIDIA  Intuit  salesken

SAMSUNG  TEKION  LUCIDEUS  Zeta  clearTax

+900 more
Life At Scaler
School of Technology

Main Campus

Our campus is situated in the vicinity of an IT Hub at the heart of India’s Silicon Valley – Bangalore, offering learners proximity to tech giants and techies who are creating impact.

The campus is designed to enhance productivity with easy access to advanced software tools, technologies and high-speed WiFi.
Annex Hostel - Home Away from Home

From world-class facilities to essential amenities, we will take care of everything so our students can focus on one thing— their studies.

Facilities
Cafeteria, laundry, housekeeping, high-speed WiFi, reading rooms and medical centre to ensure comfort and convenience.

Support & Guidance
In case learners need any academic help or counselling, the residential faculty and Success Managers will provide after-hours guidance and support.

24/7 Open Library & Reading Rooms
To help learners stay updated with the latest developments we have all the sources they may require like course books, e-books, journals newspapers and white papers.

Safety & Security
Secured & separate residential spaces for girls and boys. Guarded by full-time security officials, and CCTV cameras.

Sports & Extra Curriculants
Access to a wide range of sports facilities including a swimming pool, football field, badminton, volleyball, basketball courts, etc.
Recreational Activities and Clubs

Our experiential learning isn’t just limited to the classroom. A Scaler learner has access to all the opportunities essential for becoming a well-rounded and high-functioning individual.

Tech-Driven Clubs

AI & TedX
To enable learners to drive their philosophy of ideas by engaging with industry experts, experiencing modern technological frameworks and networking with leaders.

Growth-Focused Clubs

Toastmasters & Entrepreneurship
To emphasise on developing intangible assets — public speaking and leadership skills. Improving these may open doors to new opportunities.

Recreational Clubs

Sports, Fitness, Cultural
To help learners stay culturally aware, participate, persevere, and instil the richness that art has to offer in everyday life. Sports leagues, competitions, theatre, dance, music, comedy, and special events are a few of the many ways for them to have fun and stay active.
# Scaler School of Technology v/s Traditional Education

<table>
<thead>
<tr>
<th></th>
<th><strong>Scaler Advantage</strong></th>
<th><strong>Traditional Education</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum</strong></td>
<td>Real-world, ready for 2027 and beyond</td>
<td>Outdated</td>
</tr>
<tr>
<td><strong>Instructors</strong></td>
<td>Worked at Google, Meta, Microsoft and many more</td>
<td>No industry experience</td>
</tr>
<tr>
<td><strong>Assignments</strong></td>
<td>Code 50+ Apps and Products</td>
<td>Theoretical written papers</td>
</tr>
<tr>
<td><strong>Mentorship</strong></td>
<td>Monthly 1:1 sessions with industry experts</td>
<td>No dedicated guidance</td>
</tr>
<tr>
<td><strong>Internship</strong></td>
<td>Compulsory Paid Internship for 1-Year</td>
<td>No support for Internship Opportunities</td>
</tr>
<tr>
<td><strong>Employability</strong></td>
<td>Ready to work at top tech companies</td>
<td>Has to undergo extra training</td>
</tr>
<tr>
<td><strong>Graduate</strong></td>
<td>At the level of a top tech company's Senior SDE</td>
<td>Starts at the level of Junior SDE</td>
</tr>
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</table>
Eligibility and Admissions

Scaler School of Technology looks forward to having those who aspire to become the top 1% of Software and Data Science professionals. To ensure each learner is given enough attention, the intake is limited to only 200 this year.
Rigorous Selection Criteria

Academics
Class X & XII Percentage (Expected / Final) from any of the recognised boards

Entrance Test
The test will evaluate candidates' Class X mathematical aptitude and basic knowledge

Profile Evaluation
Post test clearance, candidates will be interviewed to assess their communication skills and team work

Exam Details
The 2-hour-long Scaler’s National Scholarship & Entrance Test is divided into four sections:
- English
- Maths
- Logical Reasoning
- Behavioural

Important Dates & Deadlines
It is advised to apply as early as possible, as more scholarships are offered in earlier rounds.

For updates regarding any changes in the dates, keep an eye on our website.
Application Process

Our application process chalks out your performance based on grades and aptitude including both objective & subjective questions.

01 Complete the Application Online
Create a profile with your personal details, academic performance & eligibility for scholarships

02 Block A Slot For ScalerNSET
Select a suitable slot for the entrance test. The application fee for intake 1 is INR 1000

03 Appear For ScalerNSET*
Take the 2-hour long test. Candidates will be shortlisted on the basis of test scores. The admission team will get in touch for the next step i.e. in-person interview.

04 Personal Interview Round
You will be invited for a 1:1 interview where we would want to hear about your motivation for joining this course & how you plan to make the most of this opportunity.

05 Admission and Scholarship
Once the interviews are completed, we will get back with a final decision within 30 days. Results for both Test & Scholarship will be placed into 3 categories: Accepted, Waitlisted, or Rejected.

*Note: To ensure a fair selection the test will be conducted online using a strict AI-based proctoring software that monitors the candidates’ desktop activity, webcam video, and audio.

The applicants can schedule a mock test before appearing for the entrance if required.
Fee Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Admission Fees (Non-Refundable)</th>
<th>Tuition Fee*</th>
<th>Hostel &amp; Mess Fees**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>50000/-</td>
<td>2,25,000/-</td>
<td>1,30,000/- Onwards</td>
</tr>
<tr>
<td>Year 2</td>
<td>-</td>
<td>3,25,000/-</td>
<td>70,000/- Onwards</td>
</tr>
<tr>
<td>Year 3</td>
<td>-</td>
<td>4,50,000/-</td>
<td>70,000/- Onwards</td>
</tr>
<tr>
<td>Year 4</td>
<td>-</td>
<td>4,50,000/-</td>
<td>1,30,000/- Onwards</td>
</tr>
<tr>
<td>Total Fee</td>
<td>50,000/-</td>
<td>14,50,000/-</td>
<td>4,00,000/- Onwards</td>
</tr>
</tbody>
</table>

*The tuition fee mentioned above includes the course fee for the B.Sc. in Computer Science offered by BITS Pilani. Upon confirmation of the admission offer, Scaler will provide assistance in applying for the B.Sc. in Computer Science offered by BITS Pilani.

*Please note that while we strive to keep our course fees affordable, they may be subject to revision in the future due to factors such as changes in market conditions, inflation, or regulatory requirements.

**Hostel & Mess Fees is on a triple sharing basis. For additional details and options for double and single sharing, please speak to our admission counsellor.

Financing

We offer easy financing options in collaboration with our banking partners. If student loan assistance is desired, our counselling team can connect you with financial service providers.

Post application, further details will be shared with candidates by their admission counsellors.
Scholarships

We believe financial limitations should not hinder one's academic pursuits. To that end, we offer scholarships to our learners, ranging from 50% to 100% of the tuition fee, based on their profile. Before applying please go through the list of scholarships we offer:

**Brightest Minds Scholarship**

This scholarship recognises and rewards candidates with exceptional academic achievements in competitive exams.

**Eligibility** With exceptional academic performance in tests such as the JEE, CBSE exam, KVPY, NTSE, etc.

**The Young Coding Enthusiast Scholarship**

To identify and support talented young learners who are passionate about coding and technology.

**Eligibility** Demonstrate coding proficiency through accomplishments in coding competitions, personal projects, or other related experiences.

**Women in Code Scholarship**

To support and encourage talented female learners who have a passion for coding and a desire to pursue a career in technology.

**Eligibility** Exceptional women candidates who demonstrate affinity for coding through competitions, tech events, or other related experiences.

**Brighter Future Scholarship**

To ensure that learners have the opportunity to pursue their academic goals, regardless of their family's income level.

**Eligibility** Candidates who hail from families with an annual income that is less than 8 lakhs per annum

Those interested in applying for a scholarship must submit their applications as early as possible to provide our admission counsellors with sufficient time to thoroughly review their scholarship case before presenting it to the scholarship committee for evaluation.
Our graduates say it best

Ishan Sarma  SDE I,  Amazon
“Perhaps the biggest challenge in my journey was to find the right place that would give structure to my learning. Scaler’s course really helped in a way my college couldn’t. The course was structured, and the instructors were pretty awesome.”

Yash Raizada  SWE,  Microsoft
“Scaler has acted as a platform where I could learn, experiment and explore outside my curriculum along with like-minded people and awesome instructors, which undoubtedly led to mastery in conquering complex CS concepts.”

Vinayak G Bhat  SWE,  Google
“Scaler gave me a community of thousands of people coming together to work together towards a common goal. The community-focused learning and mentorship really pushed me to become a more confident version of myself!”

Bharath Veldi  DevOps Engineer  Amazon
“Scaler’s curriculum included all sorts of industry relevant content, which was indeed what I needed at the time. I learned how to manage my time efficiently to maximise my results, and this skill has proven to be unbelievably helpful and has pushed me closer than ever to my milestones!”
Abirami S  SDE-II, ZETWERK
“I truly cherish my journey to Zetwerk, and I could not have accomplished it without Scaler’s help. The curriculum is industry standard, which helps one prepare for real-life challenges in the best way possible.”

Parth Dixit  SDE, amazon
“Scaler was nothing short of a blessing. With the backing of my fantastic mentors and instructors, I sat for and proudly laid claim to my position as a Software Engineer at Amazon!”

Dhruv Sethi  SDE, amazon
“Reflecting back on life, I would have done many things differently one of them being – Joining Scaler earlier. I am extremely happy with the direction my life has taken post-Scaler. 11/10 recommended!!”

Krishna Chaitanya  SWE-III, Walmart
“Scaler was my guiding light. My experience with them has taught me consistency, discipline, and adaptation. For someone of my background to score offers from tech giants like Walmart speaks for itself!”

+1000 more such success stories which you can read here
Take the first step towards becoming a part of the Top 1% of Software Engineers in the country!

Hear our Co-founder’s Message:

Watch the Full Video

Apply Now

Visit: scaler.com/school-of-technology
Take a deep-dive into our curriculum and start your learning journey.
### Phase 1 (18 Months)

#### Trimester 1 (3 Months)

<table>
<thead>
<tr>
<th>Skills</th>
<th>Topics</th>
<th>Learning Outcomes</th>
<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Computer Programming- Basics</td>
<td>Learn to write optimal codes with respect to time and space</td>
<td>Command line calculator, BMI calculator, Number guessing game</td>
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<tr>
<td></td>
<td></td>
<td>Implement sorting and searching algorithms and compare their runtime complexity</td>
<td></td>
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<tr>
<td></td>
<td>Command Line Interfaces and Shell Scripting</td>
<td>Learn to use Shell Scripting to crawl Web pages &amp; modify Query files</td>
<td>Web Crawler</td>
</tr>
<tr>
<td></td>
<td>Discrete Math</td>
<td>Learn Maths concepts required in Computer Science</td>
<td></td>
</tr>
<tr>
<td><strong>Soft Skills</strong></td>
<td>English &amp; Grammar</td>
<td>Brush up core English, work on fluency &amp; communication skills</td>
<td></td>
</tr>
</tbody>
</table>

#### Trimester 2 (3 Months)

<table>
<thead>
<tr>
<th>Skills</th>
<th>Topics</th>
<th>Learning Outcomes</th>
<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Data Structures &amp; Algorithms-I</td>
<td>Implement Data Structure Library</td>
<td>Implement expression evaluator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learn &amp; apply String Matching Algorithms, Trees &amp; Priority Queues</td>
<td>Implement phone directory with efficient search functionality</td>
</tr>
<tr>
<td></td>
<td>Web Development Basics</td>
<td>Create responsive &amp; scalable websites using CSS &amp; JavaScripts</td>
<td>Implement the least recently used cache</td>
</tr>
<tr>
<td></td>
<td>Advanced Shell Scripting</td>
<td>Write complex shell scripts to automate day-to-day tasks like downloading videos, sharing files, &amp; managing remote devices</td>
<td>YouTube downloader, Set birthday reminders, File sharing</td>
</tr>
</tbody>
</table>

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## Trimester 3 (3 Months)

<table>
<thead>
<tr>
<th>Skills</th>
<th>Topics</th>
<th>Learning Outcomes</th>
<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Data Structures &amp; Algorithms-II</td>
<td>Apply programming paradigms like Backtracking, Greedy &amp; Dynamic Programming to solve complicated problems</td>
<td>Sudoku Solver, Path Finder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use Graph Algorithms to solve path optimisation problems for different networks</td>
<td></td>
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<tr>
<td></td>
<td>Class &amp; Schema Design</td>
<td>Create extensible, maintainable Class &amp; Database Schema Designs for software systems</td>
<td>Schema Design of EdTech, Social Media, Dating &amp; Food delivery applications</td>
</tr>
<tr>
<td></td>
<td>Thinking &amp; Articulation</td>
<td>Learn to present ideas &amp; thoughts more clearly</td>
<td></td>
</tr>
<tr>
<td><strong>Soft Skills</strong></td>
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<td></td>
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</tbody>
</table>

## Trimester 4 (3 Months)

<table>
<thead>
<tr>
<th>Skills</th>
<th>Topics</th>
<th>Learning Outcomes</th>
<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Operating Systems &amp; Network Programming-I</td>
<td>Understand basics of Operating Systems &amp; Computer Networks</td>
<td>CPU Scheduling Simulations, Memory Management Simulations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement common computing problems in Concurrency like the Reader-Writers problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maths-II</td>
<td>Solve difficult probability &amp; statistical problems Implement RSA encryption</td>
<td>Https Encryption</td>
</tr>
<tr>
<td></td>
<td>Data Science Basics</td>
<td>Analyse data &amp; derive business decisions using Python</td>
<td>Business case studies</td>
</tr>
</tbody>
</table>
## Trimester 5 (3 Months)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Operating Systems &amp; Network Programming-II</td>
<td>Learn about Socket Programming</td>
<td>Web Server (that can handle 100k+ concurrent requests, per second)</td>
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<tr>
<td></td>
<td></td>
<td>Build a fully functional Web Server</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Web Development-II</td>
<td>Build applications using React, implement website optimisation strategies</td>
<td>Online Excel Sheet</td>
</tr>
<tr>
<td></td>
<td>Product Management for Software Engineers</td>
<td>Master product roadmaps &amp; matrices</td>
<td>Case Studies</td>
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<td></td>
<td></td>
<td>Create OKRs, using tools like Google Analytics / Mixpanel to track various matrices</td>
<td></td>
</tr>
</tbody>
</table>

## Trimester 6 (3 Months)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Web Development-III</td>
<td>Use MVC Framework to build extensible, scalable &amp; maintainable softwares</td>
<td>Fully Functional eCommerce Website (with payment integrations)</td>
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<tr>
<td></td>
<td></td>
<td>Do integration with external APIs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Data Structures &amp; Algorithm Refresher</td>
<td>Solve hard interview problems in time-restricted environment</td>
<td></td>
</tr>
<tr>
<td><strong>Soft Skills</strong></td>
<td>Verbal Ability</td>
<td>Explain projects &amp; communicate approaches effectively</td>
<td></td>
</tr>
</tbody>
</table>

## Phase 2 (12 Months)

Gain Industry Experience as a Paid Intern
**Phase 3 (18 Months)**

### Trimester 7 (3 Months)

<table>
<thead>
<tr>
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</tr>
</thead>
</table>
| **Hard Skills** | Advanced Data Structures & Algorithms | Implement Data Structures like Segment Trees, AVL Trees, Binary Indexed Trees  
Solve hard DSA problems using concepts like Binary Lifting, Digit DP, lazy Propagation, etc. | Advanced DS Library                        |
|            | Maths for Data Science & Machine Learning| Solve hard problems involving Calculus, Hyperplanes, Gradient Descent, Principal Component Analysis, etc. |                                           |
| **Soft Skills** | Management 101                          | Estimate effort and timelines effectively to create a Gantt Chart around it        |                                           |

### Trimester 8 (3 Months)

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Low-Level Design-I [SDE]</td>
<td>Create Extensible &amp; Maintainable Software Systems we see around us</td>
<td>Design games like Tic-Tac-Toe, Snake &amp; Ladder and more</td>
</tr>
<tr>
<td></td>
<td>Neural Networks &amp; Machine Learning [DSML]</td>
<td>Implement Machine Learning Models such as Linear Regression, Logistic Regression, KNN</td>
<td></td>
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</tbody>
</table>

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### Trimester 9 (3 Months)

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<th>Learning Outcomes</th>
<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Low-Level Design-II [SDE]</td>
<td>Rationalise the best design pattern for a given use case</td>
<td>Design applications like BookMyShow, Splitwise, &amp; more</td>
</tr>
<tr>
<td></td>
<td>Algos for HFT [AT]</td>
<td>Build Financial Data Models/ Basic Algos for High-Frequency Trading</td>
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</tr>
<tr>
<td></td>
<td>[DSML] Unsupervised Machine Learning</td>
<td>Implement clustering Algorithms &amp; Principal Component Analysis</td>
<td>Recommendation System for eCommerce Website</td>
</tr>
</tbody>
</table>

### Trimester 10 (3 Months)

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>High-Level Design-I [SDE]</td>
<td>Design extensive, scalable systems we see around us today</td>
<td>Design application like Facebook Messenger</td>
</tr>
<tr>
<td></td>
<td>System Programming [AT]</td>
<td>Apply System Programming using C/C++ to work with Sockets, Threads, OS File System &amp; Memory Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural Language Processing [DSML]</td>
<td>Build systems that take commands in languages like English</td>
<td>Siri/Alexa</td>
</tr>
</tbody>
</table>
### Trimester 11 (3 Months)

<table>
<thead>
<tr>
<th>Skills</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>High-Level Design-II [SDE]</td>
<td>Build a Live Streaming Website on AW</td>
<td>[Google Meet]</td>
</tr>
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<tr>
<td></td>
<td>Big Data [SDE]</td>
<td>Implement data warehousing, create data lakes, or query such data using map-reduce / Spark</td>
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<tr>
<td></td>
<td>Computer Vision [DSML]</td>
<td>Build systems that can do Object Segmentation, Localisation, and Detection in image / video data</td>
<td>[Self Driving Car Software]</td>
</tr>
</tbody>
</table>

### Trimester 12 (3 Months)

<table>
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<th>Skills</th>
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<th>Project Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hard Skills</strong></td>
<td>Cyber Security [SDE]</td>
<td>Learn to figure out security holes in the codebase and how to fix them</td>
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<tr>
<td></td>
<td>Machine Learning Ops [DSML]</td>
<td>Set up basic clusters to run Machine Learning at scale</td>
<td></td>
</tr>
</tbody>
</table>

Note: The curriculum for Phase 3 (last 18 months) is tentative. There might be changes as per discretion of academic experts, or as per industry requirements.
Thank You