

Recipe For Academic Success

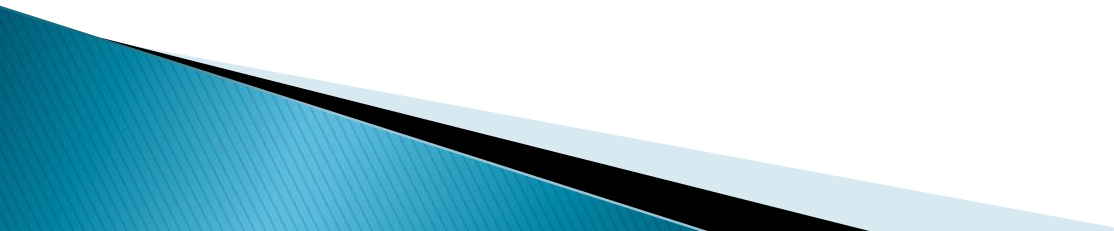
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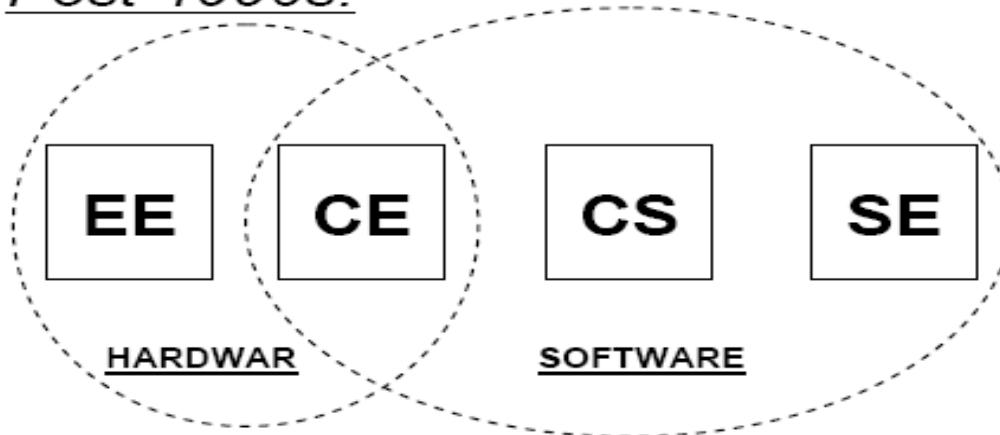
- ▶ Computing Curricula
 - ▶ Five Pillars of Computing
 - ▶ TIOBE Index (Software Popularity Rating)
 - ▶ Recipe for Academic Success
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Computing Curricula (Pre-2000)

Pre-1990s:

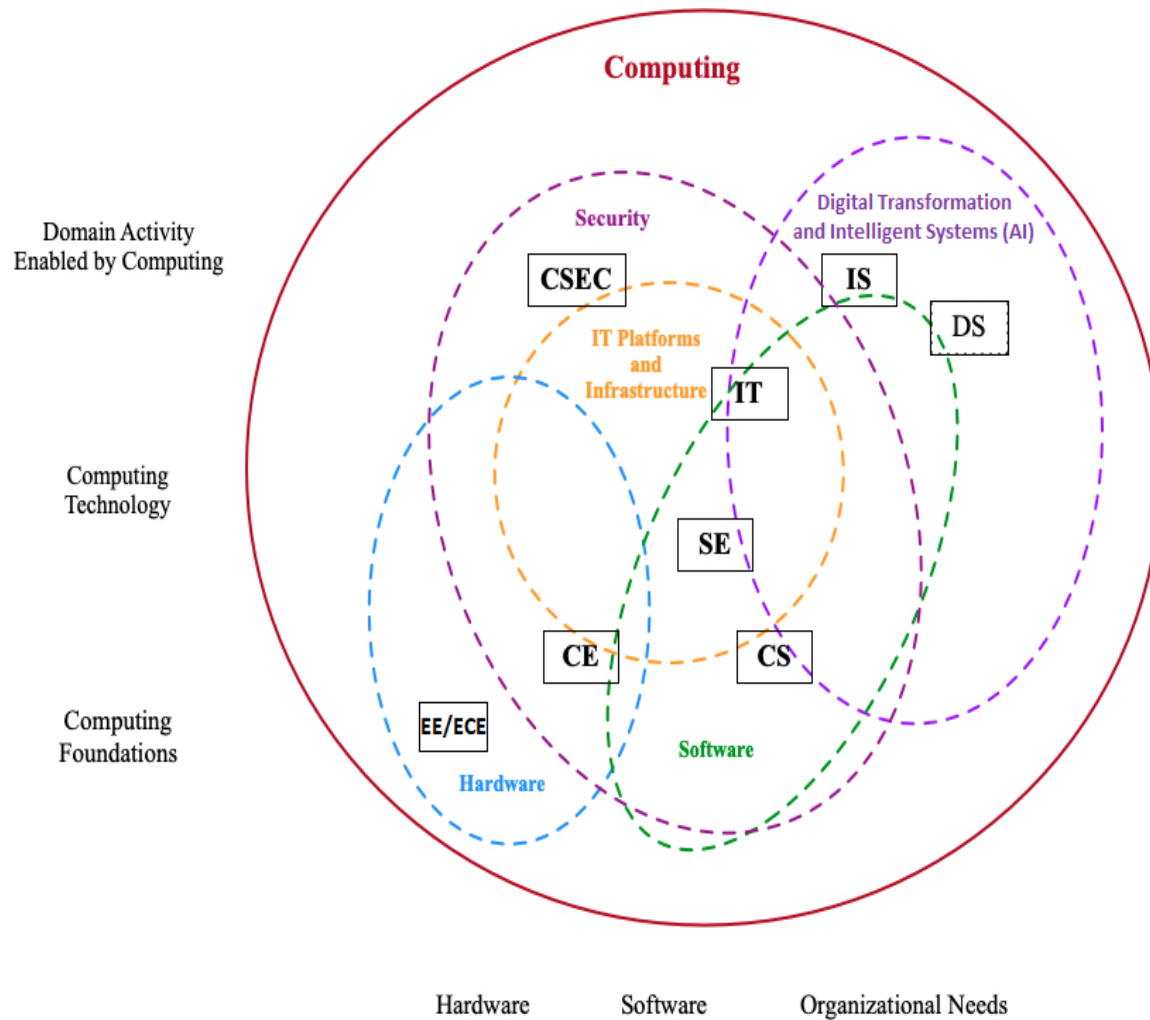


Post-1990s:



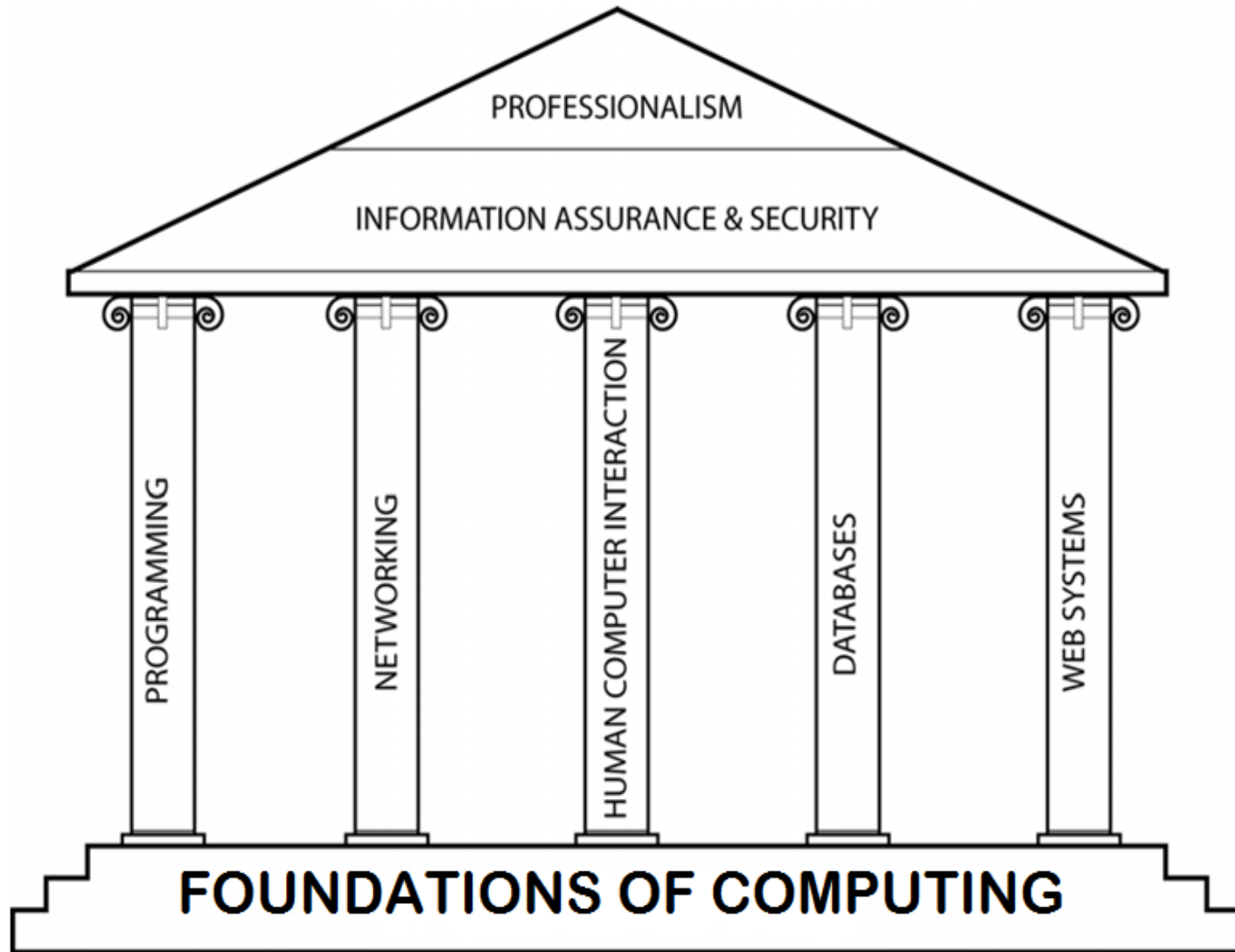
Harder Choices: How Circuit Branches Appear Differently to Students

Computing Curricula (Post-2000)

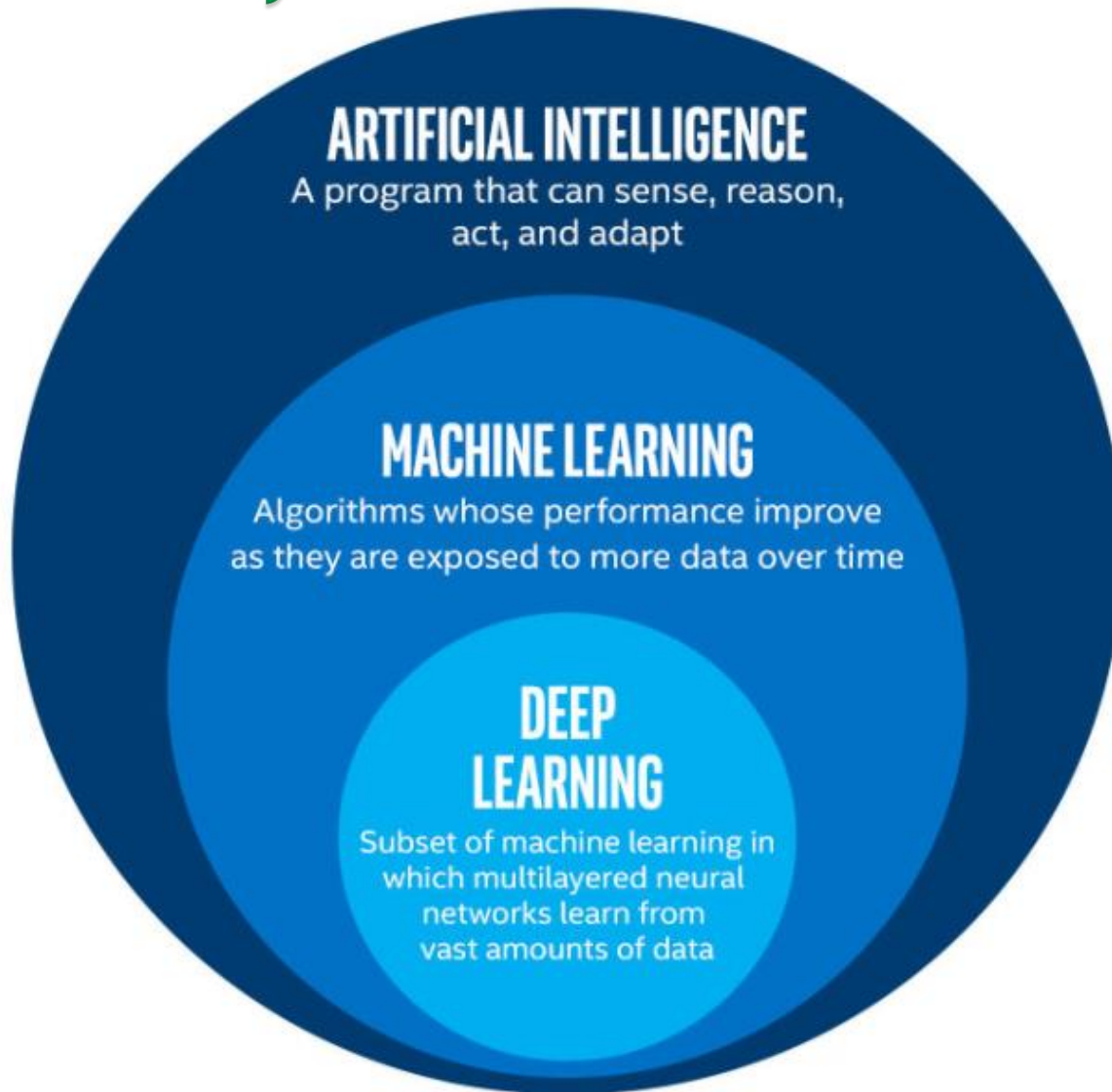


Legend: AI=Artificial Intelligence; CE=Computer Engineering; CS=Computer Science; CSEC=CyberSECurity; EE=Electrical Engineering; DS=Data Science; ECE=Electronics & Commn Engg; IS=Information Systems; IT=Information Technology; SE=Software Engg.

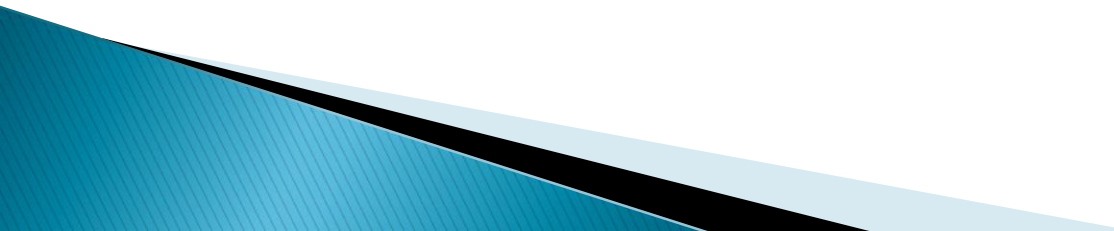
Five Pillars of Computing



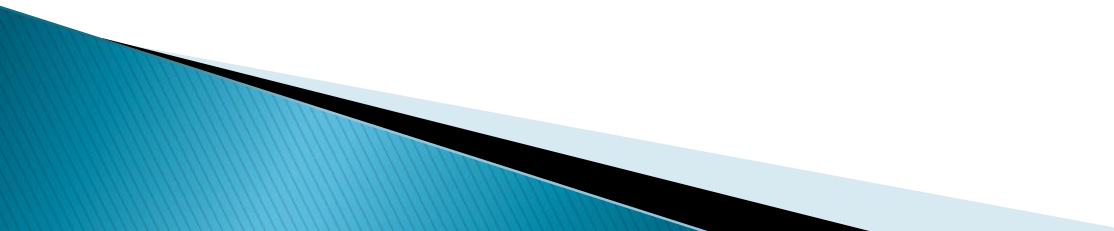
AI, ML and DL



Cutting-Edge Technologies

- ▶ Artificial Intelligence, ML and DL
 - ▶ Big Data Analytics and Blockchain
 - ▶ Cloud/Edge/Fog/Mist Computing
 - ▶ IoT/IIoT, and Smart Systems
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Knowledge Skills Required

- ▶ Analytical Ability (Problem Solving Skills)
 - ▶ Quantitative Ability
 - ▶ Innovative and Creative Mindset
 - ▶ Command Over Field of Study
 - ▶ Commn. Skills (Oral and Written)
 - ▶ Inter Personal Skills (Team Spirit)
 - ▶ Maturity and Self Confidence
 - ▶ Motivation and Self Initiation
 - ▶ Leadership and Assertiveness
 - ▶ Resilient and Emotional Intelligent
 - ▶ Professional Ethics and Code of Conduct
 - ▶ Contribution to Society/Human Well-Being
- 

TIOBE INDEX (SW POPULARITY RATING)

- ▶ The **TIOBE Programming Community Index** is an indicator of the popularity of Programming Languages. **This TIOBE Index is updated once a month.**
- ▶ The ratings are based on the number of skilled engineers world-wide, courses and third party vendors. Popular search engines such as Google, Bing, Yahoo!, Wikipedia, Amazon, YouTube and Baidu are used to calculate the ratings.
- ▶ It is important to note that the TIOBE Index is not about the *Best* Programming Language or the Language in which the *Most Lines of Code* have been written.
- ▶ **This Index can be used to check whether your programming skills are still up to date or to make a strategic decision about what programming (computing) language should be adopted when starting to build a new software system.**

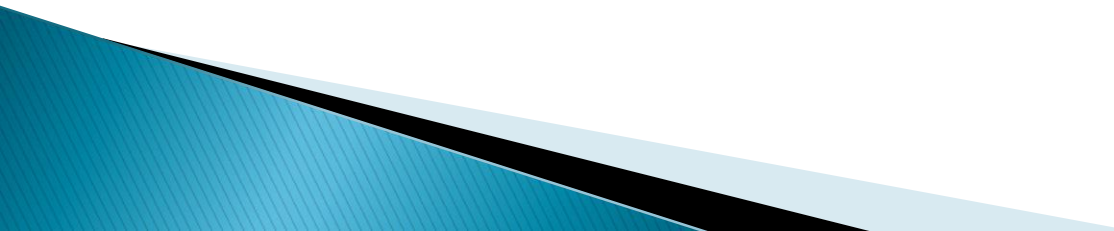
TIOBE INDEX (SW POPULARITY RATING)

Feb. 2023	Feb. 2022	Programming Language
1	1	Python
2	2	C
3	4	C++
4	3	Java
5	5	C#
6	6	Visual Basic
7	7	JavaScript
8	10	SQL
9	9	Assembly Language
10	8	PHP

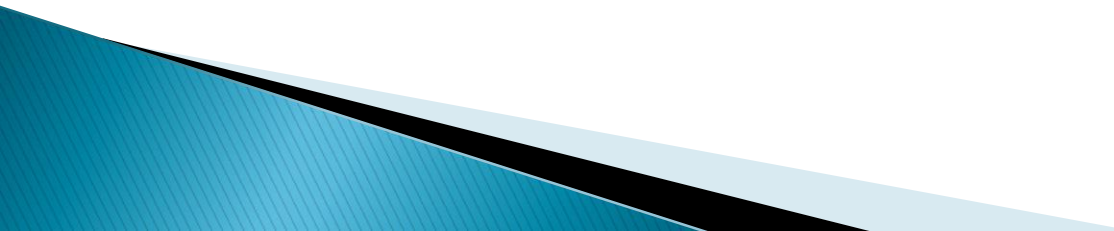
TIOBE INDEX (SW POPULARITY RATING)

Feb. 2023	Feb. 2022	Programming Language
11	11	Go
12	13	R
13	14	MATLAB
14	15	Delphi/Object Pascal
15	12	Swift
16	16	Ruby
17	19	Perl
18	22	Scratch
19	17	Classic Visual Basic
20	24	Rust

Recipe For Academic Success

- ❑ Classroom Success
 - ❑ Program Success
 - ❑ Graduation Success
- 

Classroom Success

- ▶ Read Material **BEFORE** the class discussion
 - ▶ **Check Electronic Commns.** (email, whatsapp) often
 - ▶ **Use** the additional resources identified in syllabus
 - ▶ **ASK** questions about what you didn't understand
 - ▶ **DON'T** do assignments and projects at last minute
 - ▶ **REVEIW** the lectures and notes
 - ▶ Seek **HELP** if you are having difficulties
 - ▶ **OFFER** constructive feedback to the instructor
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Program Success

- ▶ **Select Right Courses (Electives)** before filling up the online (IRIS) Registration Form verified by the Faculty Advisor
- ▶ **Meet your *Faculty Advisor (FA)* for the right advise when required!**
- ▶ **Be Aware** of the academic credit requirements for your studies
 - Your contact is the *FA and the UG Curriculum Rules* of NITK
- ▶ **Make sure** that your academic schedule is on the right track
 - NITK is a premier institution of national importance (**NIRF Rank 10**), where courses are offered every semester
- ▶ **Check with Career Development Centre, NITK for Summer Internships (2–3 Months) and Major Project–based Internship (6–8 Months)**
- ▶ **Ensure** that you will complete the most of the credit requirements (150 out of 161 (UG)) by the end of 3rd Year UG so that you can plan for 6–8 months Internship/Major Project

Graduation Success

- ▶ **Apply for M.S/Ph.D Degree** in Reputed Foreign Universities (USA, UK, Canada, Europe etc.) **at least Two Semesters before** your graduation **and Get Letters of Recommendations (LoR)** from key faculty members in your Final year UG Program
- ▶ **Prepare for GATE** so as enable you to seek admission for your M.Tech/Ph.D Degree in the Premier Institutes like IISc, IITs at least Two Semesters before you intend to graduate
- ▶ **Create Your Own Startup** while you are studying based on your Innovative Ideas and Seek Advise from NITK STEP
- ▶ **Start Checking out Job Market by the end of 3rd year UG**
 - NITK Career Development Centre (Formerly Training/Placement Cell)

“Arise! Awake! And Stop Not Until the Goal is Reached”
[Swami Vivekananda]

“ We Are All Born With A Divine Fire In Us.
Our Efforts Should Be To Give Wings To This Fire,
And Fill the World With The Glow Of Goodness”
[Dr. A. P. J. Abdul Kalam]

“Sarve Janah Sukhino Bhavantu
Lokaa Samastha Sukhino Bhavantu”

ॐ सर्वे भवन्तु सुखिनः (may every one be happy)
सर्वे सन्तु निरामयाः । (may every one be free from all diseases)
सर्वे भद्राणि पश्यन्तु (may every one see goodness and auspiciousness in every thing)
मा कश्चिद्दुःखभाग्भवेत् । (may none be unhappy or distressed)
ॐ शान्तिः शान्तिः शान्तिः ॥

Thank You for Your Attention!