

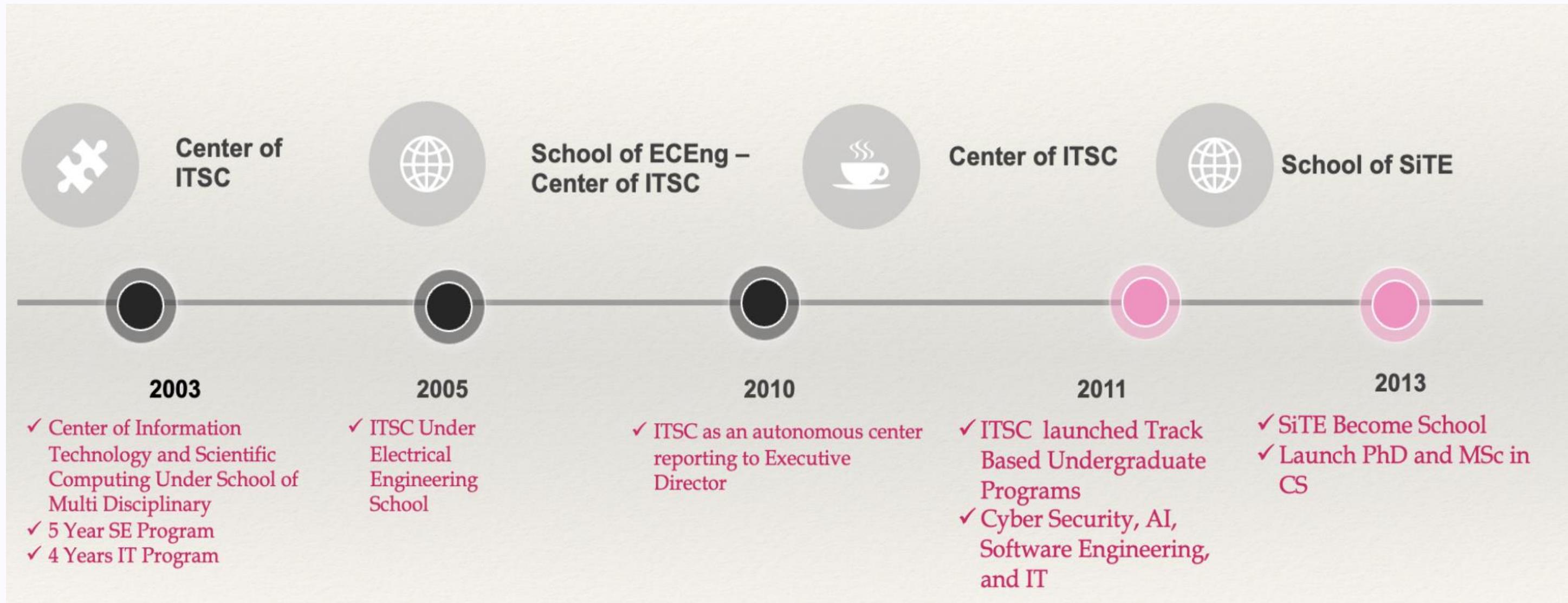


Welcome to the School of Information Technology and Engineering -SiTE

Preparing future leaders in cutting-edge technology fields

by Henock Mulugeta (PhD)

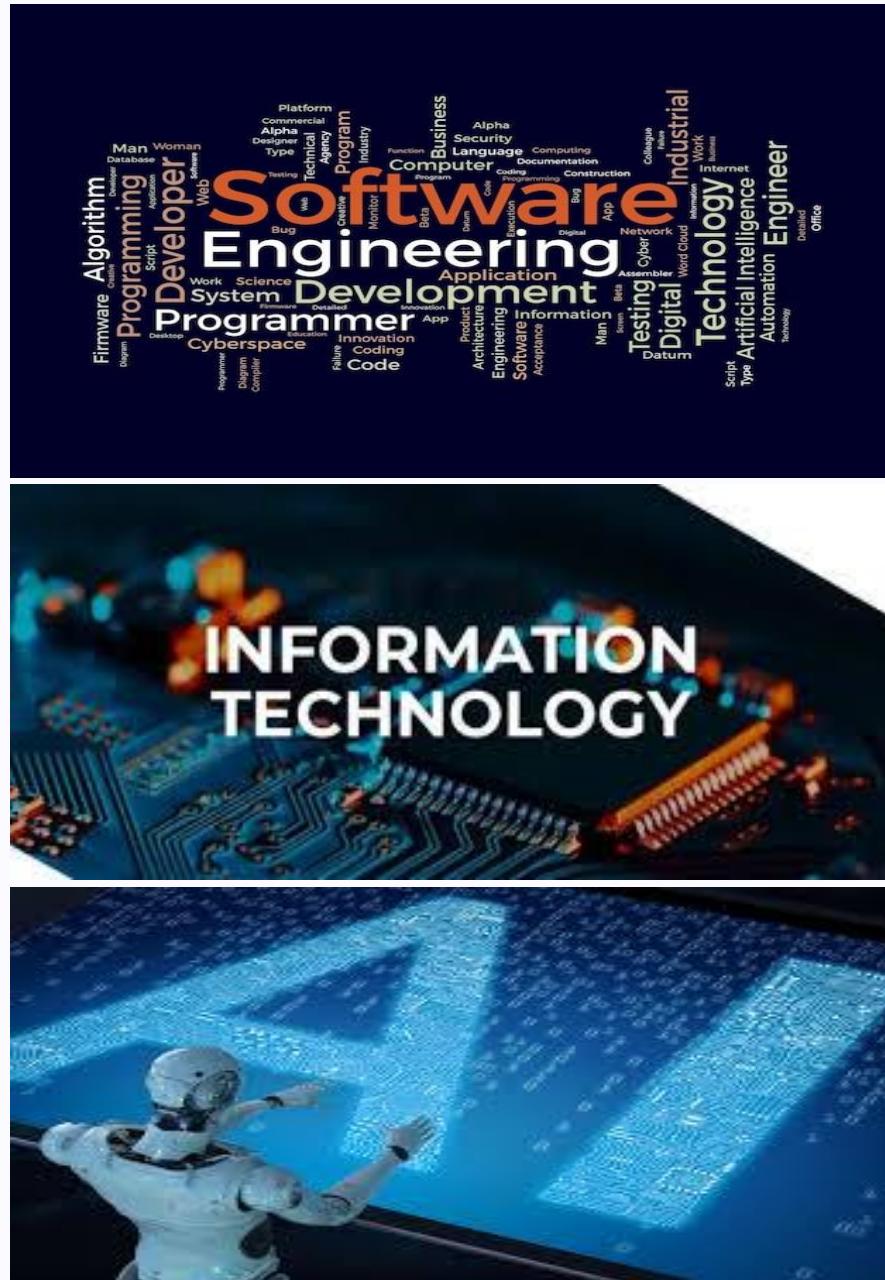
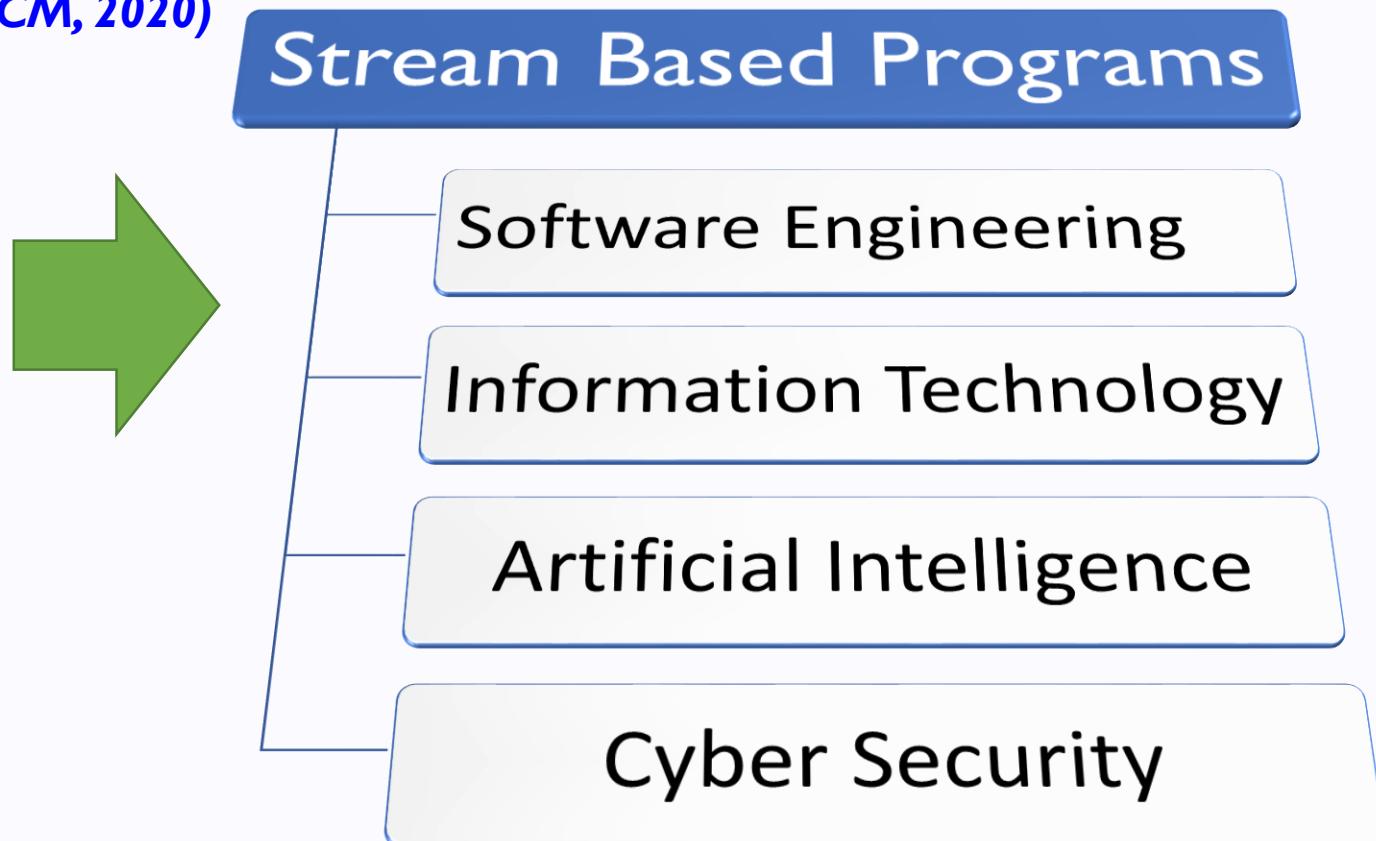
History of SiTE

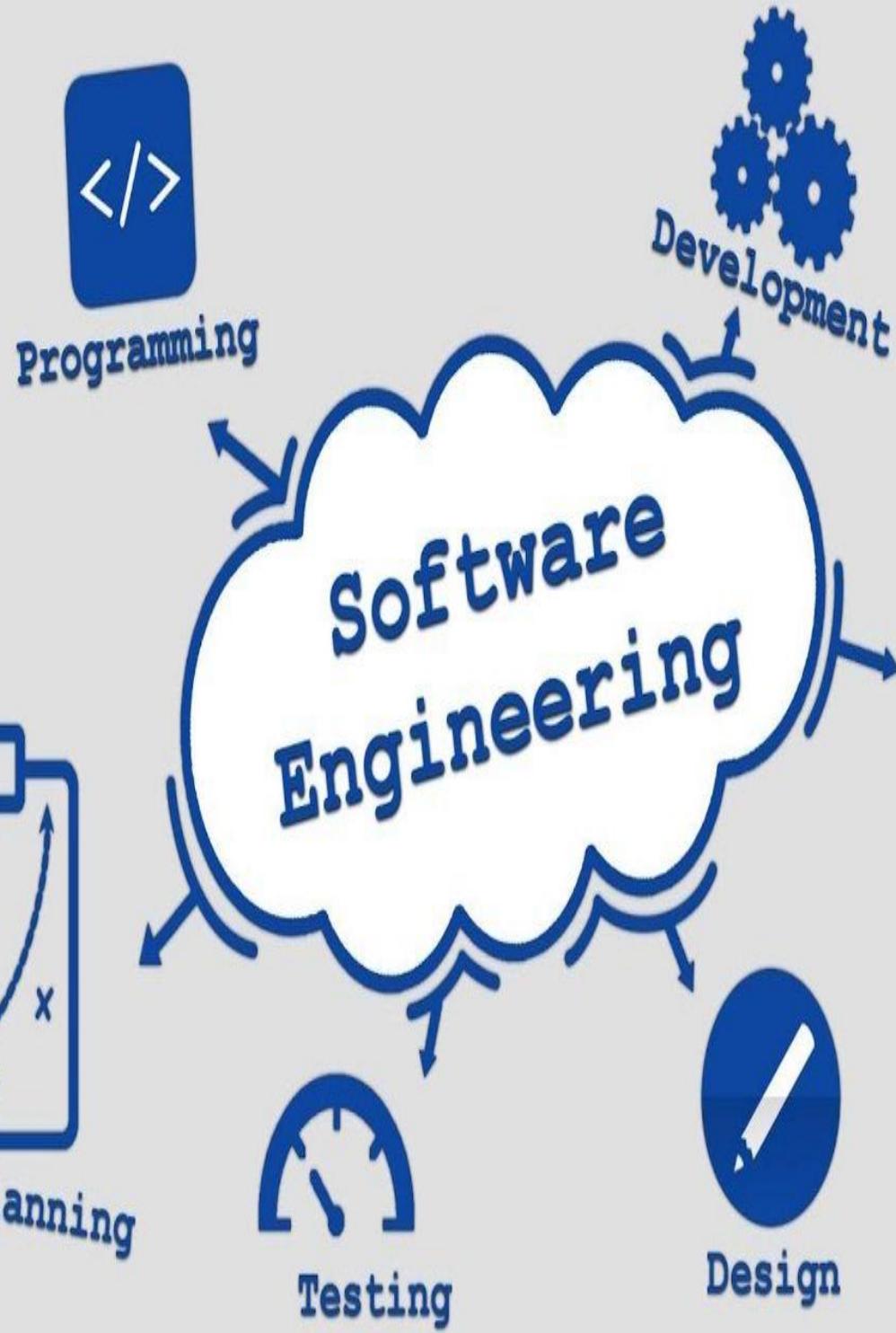


SiTE Programs

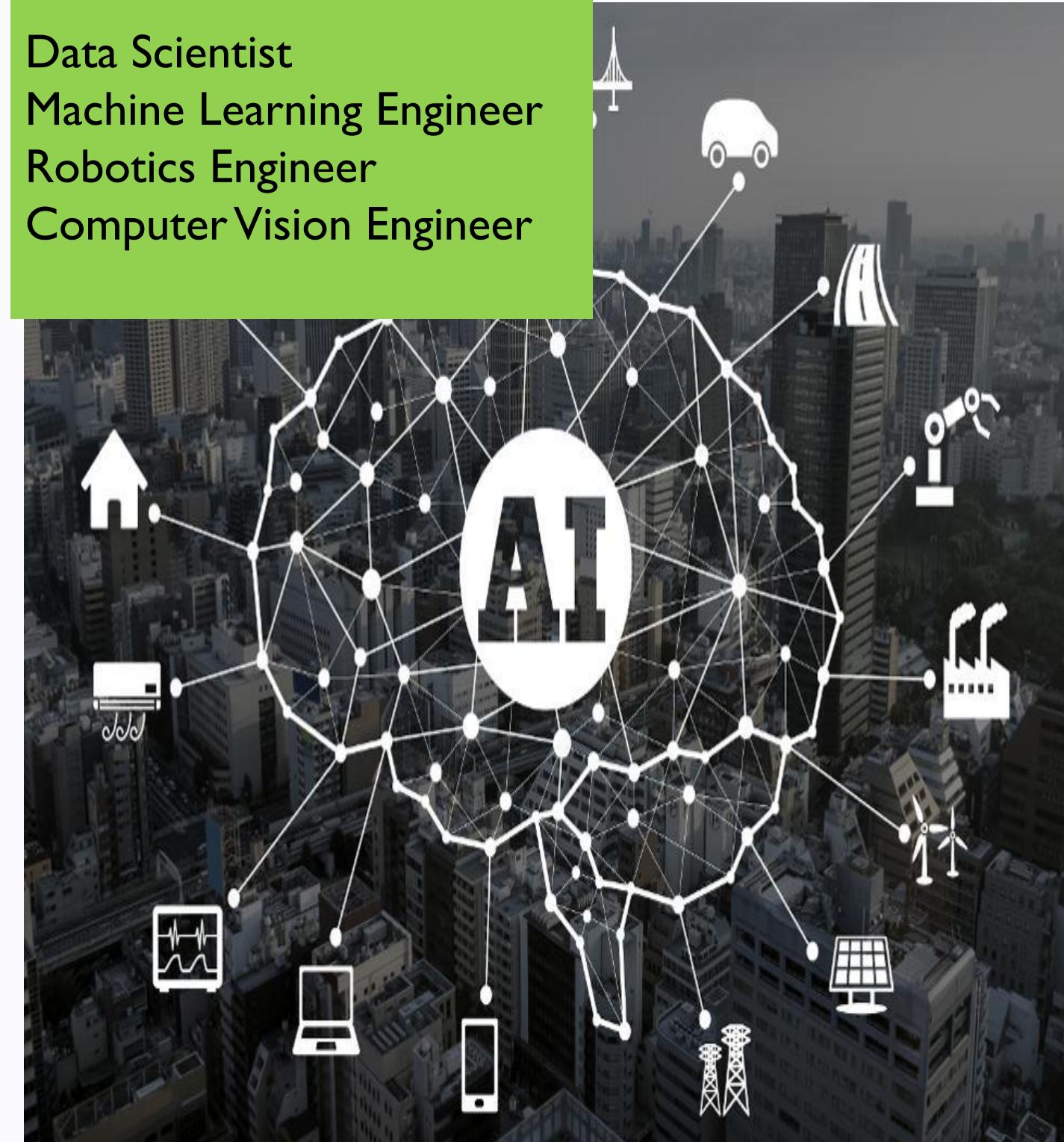
Major Computing disciplines (ACM, 2020)

- Computer Engineering (CE)
 - **Cybersecurity (CSEC)**
 - Information Systems (IS)
 - **Information Technology (IT)**
 - **Software Engineering (SE)**
 - Information Science (IS)
 - **Artificial Intelligence**
 - Computer science (CS)





Data Scientist
Machine Learning Engineer
Robotics Engineer
Computer Vision Engineer



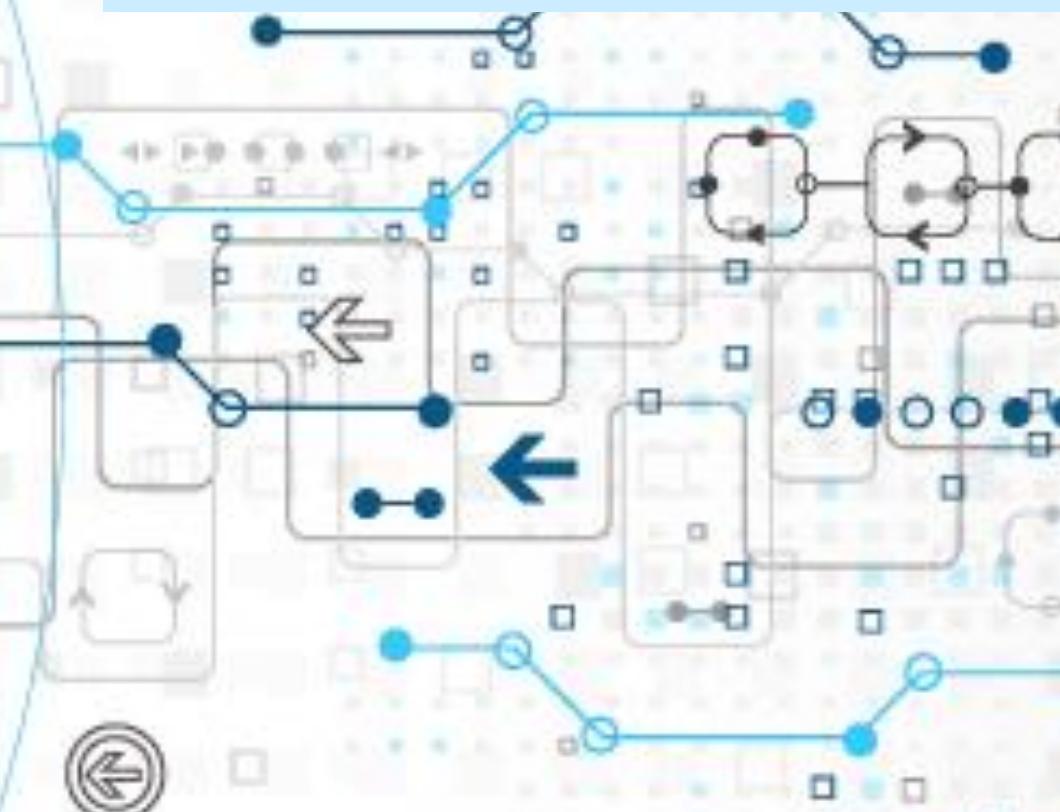
information technology

Computer Network Architect
Computer System Analyst
Computer Support Specialist
Database Administrator
Information Security Analyst
Network and Computer System Administrator

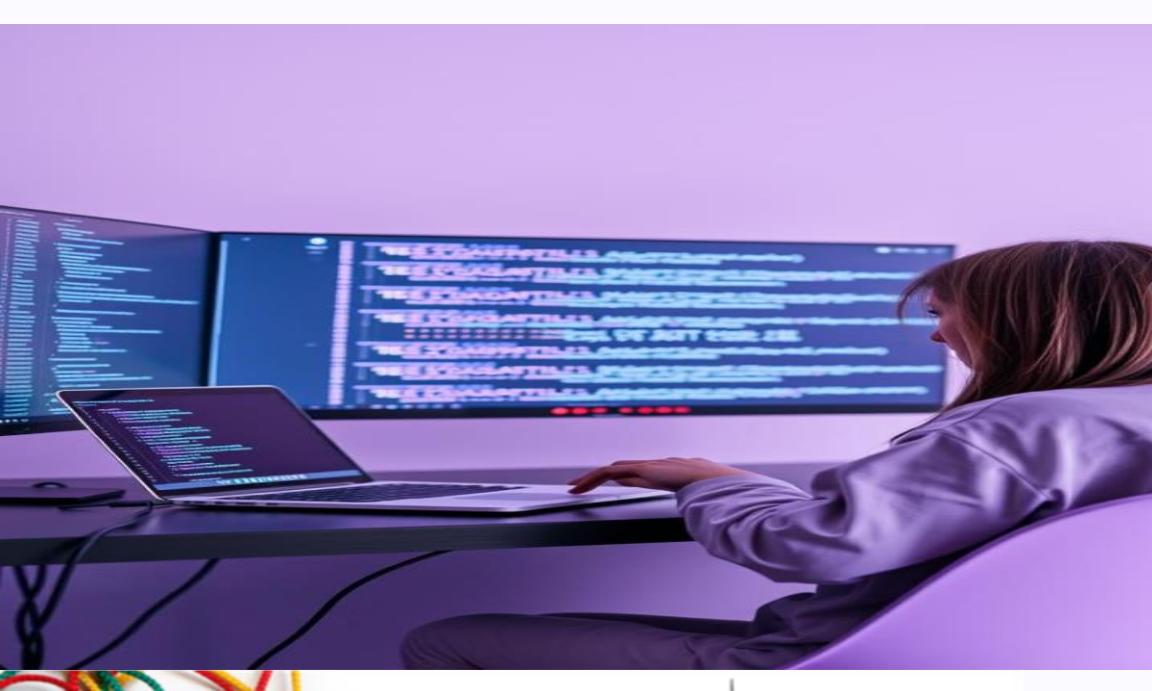




Cyberwarfare and Intelligence
Cybersecurity Governance (CISO)
Network and System Security
Cryptography
Digital Forensic



Cyber Security Specialist
Cyber Security Analyst
Cyber Security Manager (CISO)



Key Skill Requirements



Problem-Solving and Critical Thinking

Analyze, strategize, and find solutions



Communication and Teamwork

Collaborate effectively, share ideas, and deliver results



Lifelong Learning and Adaptability

Stay up-to-date with evolving trends



Field-Specific Skills

Software development, machine learning, cybersecurity, IT systems



Programming Languages

1 Python

Versatile, used in web development, AI, and data science

2 Java

Popular for enterprise applications and mobile app development

3 C++

Performance-oriented language used in game development and system programming

4 JavaScript

Essential for web development, front-end and back-end

1
17 "Teate contemnulation: fe = lastl-dall;
13 "lacdelease le;
14 "uvait gondos-Tagete!);
74 Puntensisstalsragtent:
25. Wrditanaye: as)
19. stucier (tpols nety, refistwaler, 1 18);
16. couges sytet:
fonillemasiens, beansical iaglet ()
12. adesaunpeared-exit);
17. >hanger (e;
18. Tharic lsha((-cegssteridow; 1 (15)
44. "usage iniae;
stacierisnatal, afther!;
19. Tharic lypt:
16. "Trasteful neneiblly eggremiente;
17. sotter pur ap(ns, 1 11)
18. atowte lstrat apst);
17. postuer
17 >Morne: dale);
18. "moris sectionkey iistlee-regional;

16. sviremme: = 7 lyvs;
10. ssgeldisy Dileraniand Seplication table:
17. cptional dsis
11. semplay lsi
39. cartial sfbal;
24. copersise: (llecction forier, laf)
30. posetinle;
15. rarotal@scdye();
12. senetaf, rarsy fibal)
68. sageles: (sunly tectains = Eysl);

27. whaliaphefition a pesting ictader, (s):
41. lang);
15. legeing pistart by onwal;
19. ingnylied);
12. egcsier feit, sake = ralet;
34. destrure tile cospdale;
29. Lassipler larpet ief = stwal)
14. >ppistationt
75. inner (s)
16. pristawa. (iawal istable-pafl.)
13. betger frutual;
23. insetinn thamm)

Programming Languages...



Software Engineering

Java, Python, C++, JavaScript, Swift



AI Engineering

Python, R, Java, C++, ML, Deep Learning

Cybersecurity (tools)

Java, Python, C++, JavaScript, Swift
Kali Linux, nmap, metasploit, etc.



Java, Python, C++, JavaScript, Swift,
Rubby, PHP, SQL. etc.



Job Opportunities



International Context

- **Software Engineering:** Google, Microsoft, Amazon
- **AI:** Research labs, healthcare, robotics
- **Cybersecurity:** Financial institutions, government agencies
- **IT:** Cloud computing, IT consultancy



Ethiopian Context

- Growing IT hubs (e.g., Ethio ICT Park)
- Demand for software solutions in various sectors
- Local startups focusing on AI and cybersecurity



ETHIOPIA'S STATE INFORMATION NETWORK SECURITY ADMINISTRATION



Career Outlook and Opportunities

1M

Job Growth

The IT industry is expected to add millions of jobs over the next decade.

70K

Average Salary

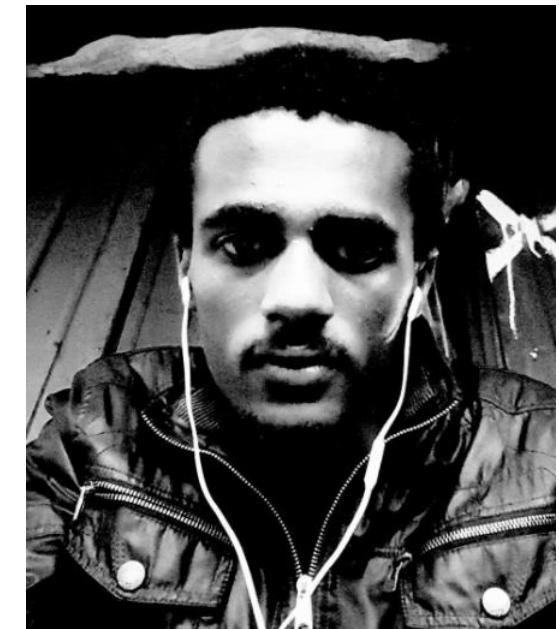
The average annual salary for IT professionals is over \$70,000.



Microsoft



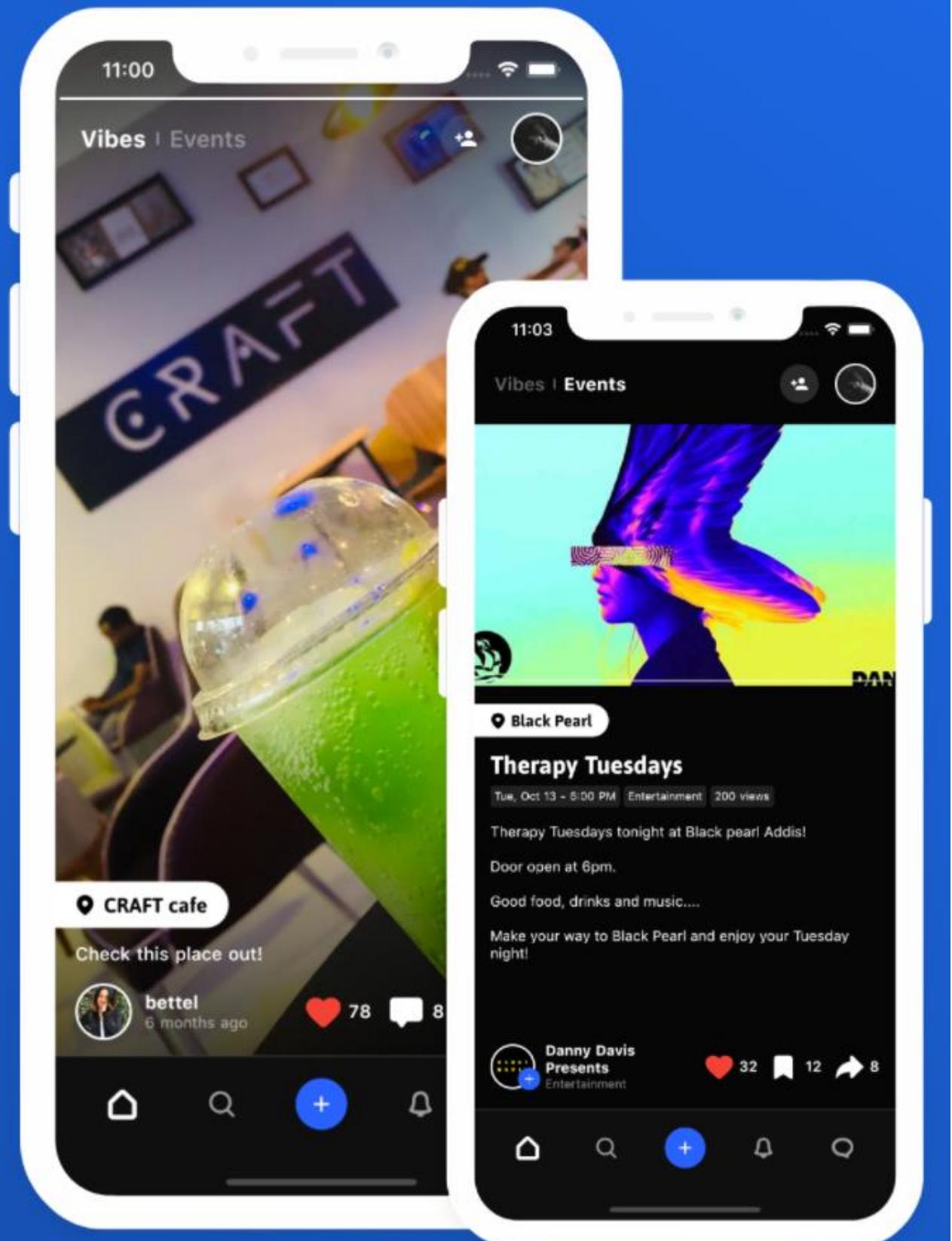
Google





TALENT
SOLUTIONS GROUP







Challenges in These Fields

Global Challenges

- Rapidly evolving technology
- Intense competition
- Ethical concerns in AI and data privacy

Local Challenges

- Limited infrastructure and resources
- Brain drain and lack of funding
- Regulatory challenges in IT and cybersecurity

Potential Application/Career Path

1

Software Engineering

Software Engineer, Web Developer, Mobile App Developer, Game Developer, Data Scientist, System Architect.

2

AI

Autonomous vehicles, virtual assistants, predictive analytics

3

Cybersecurity

Threat detection, secure communication, digital forensics

4

IT

Network management, cloud services, e-commerce solutions





Cloud Application Development



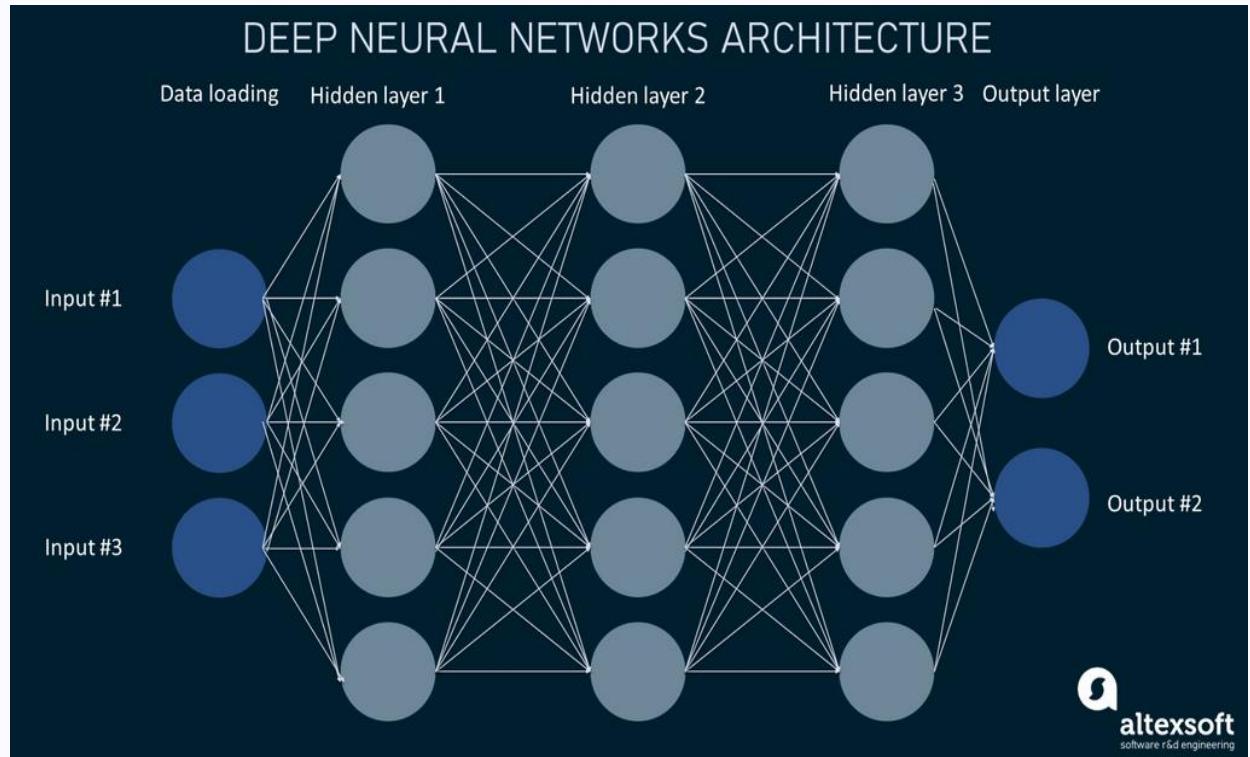
System Software



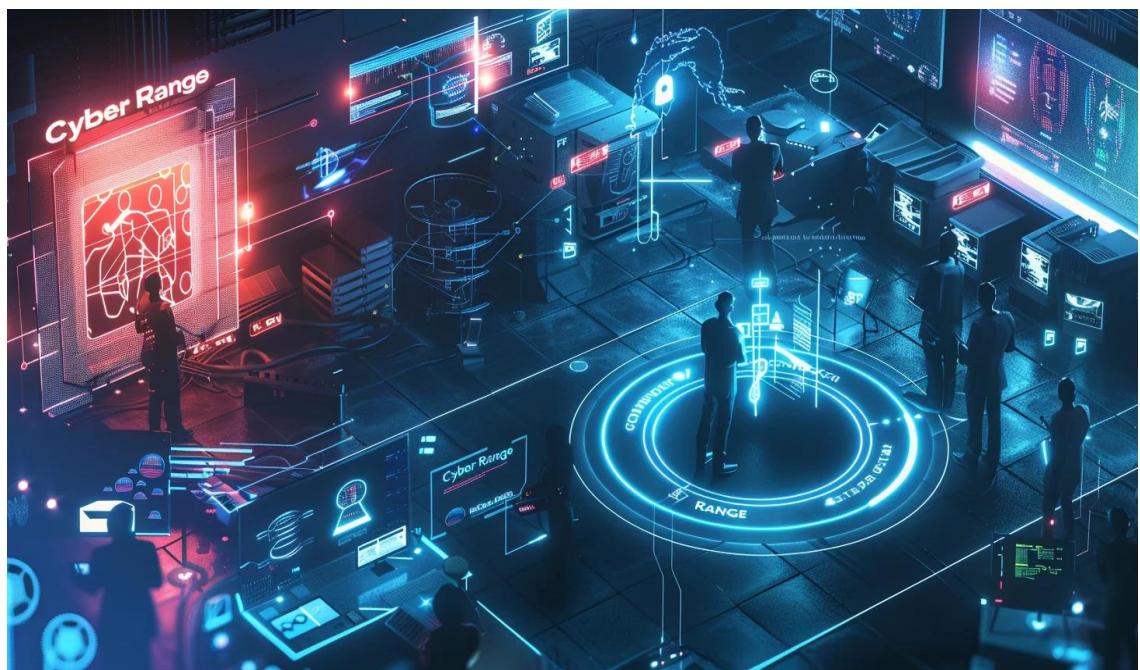
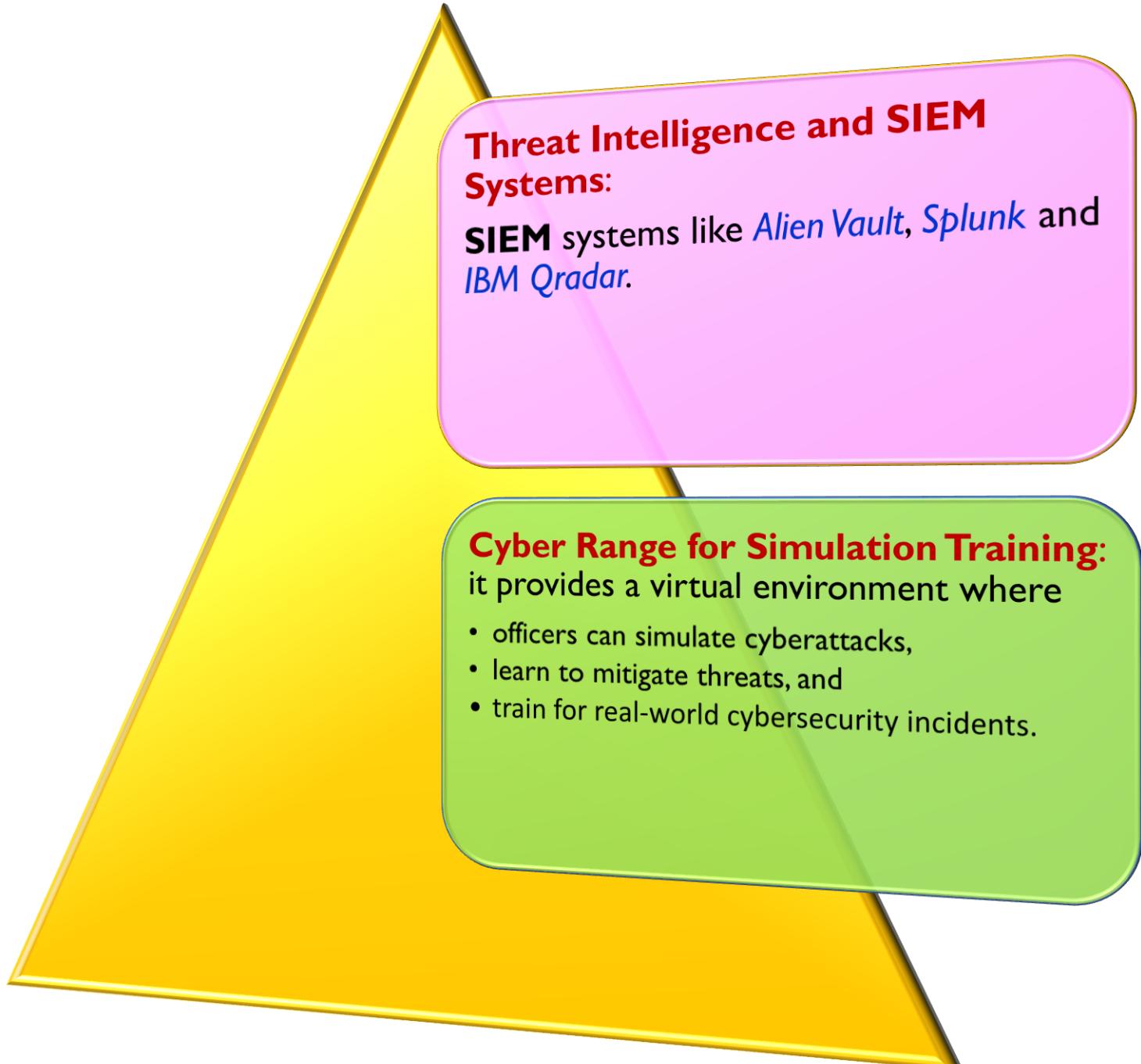
Application Software



DEEP NEURAL NETWORKS ARCHITECTURE



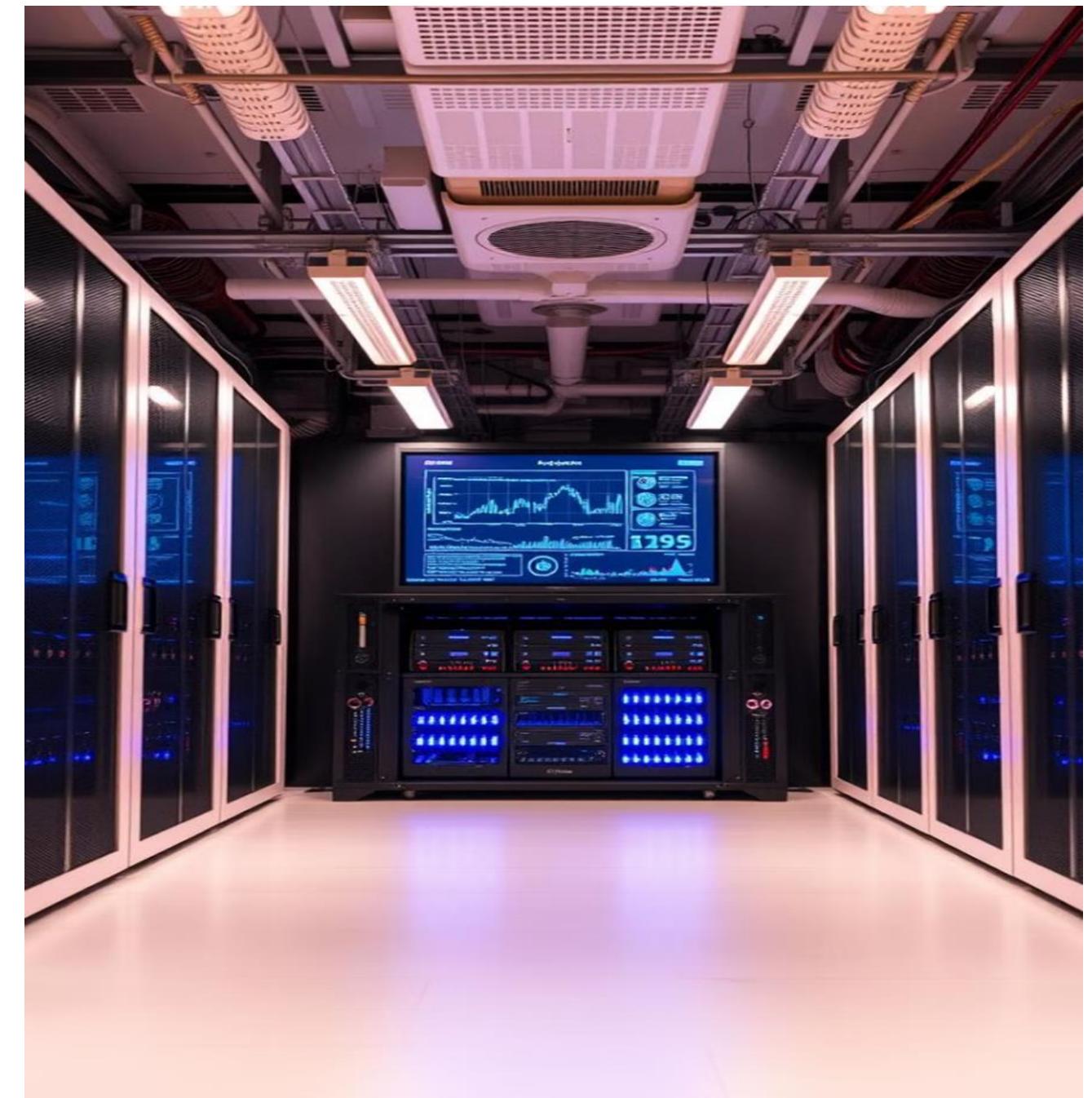
Cybersecurity and Threat Intelligence Platforms



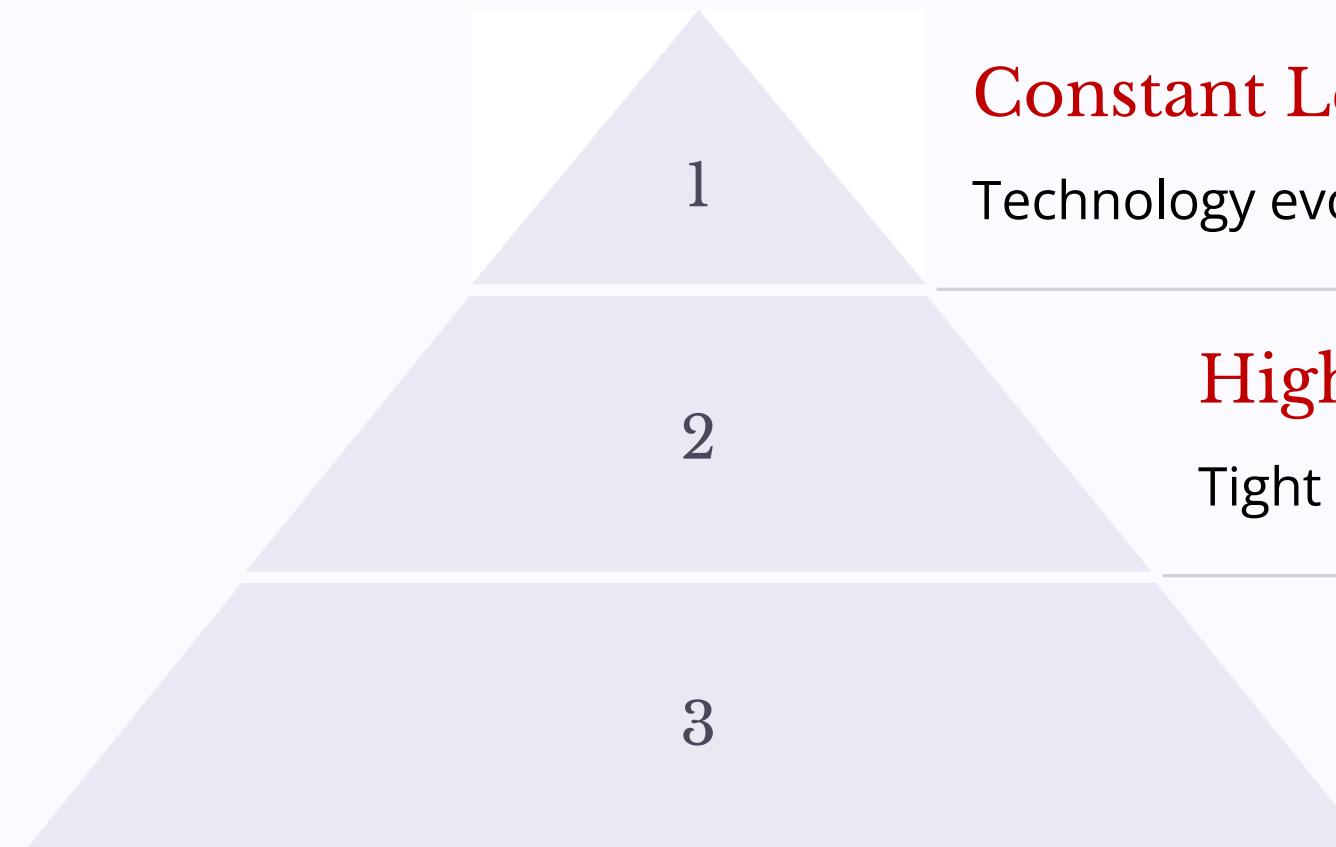
Cybersecurity Operation Center (SOC)



Information Technology (IT)



Reasons Not to Join These Fields



Constant Learning

Technology evolves rapidly



2

High-Pressure Environments

Tight deadlines and demanding projects



3

The program is challenging for everyone

Lack of experience is not the same as lack of ability



Reasons to Join These Fields

1

High Demand

Skilled professionals are in high demand



2

Innovation & Creativity

Opportunities to create impactful solutions



3

Competitive Salaries

Rewarding careers with potential for growth



4

Meaningful Impact

Contribute to various sectors



Reasons to Join These Fields...



5

High Earning Potential

Job security.



6

Make a Real Impact

Solving global challenges, improving lives.



7

Creative Work

Building innovative solutions.



8

Constant Learning

Be at the forefront of innovation.





Potential Recruiters



1

Google

Global tech giant with diverse
roles

2



IBM

Leading company in AI, cloud, and
enterprise solutions

3



Meta

Social media platform with focus
on technology and innovation

4



AWS (Amazon Web Service)

Cloud computing platform for
various industries

Popular destinations for pursuing an MSc or PhD in these fields

United States



UK



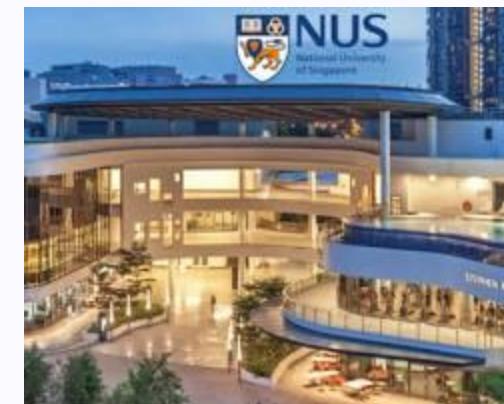
Canada



Australia



Singapore



Germany



Addis Ababa University



Resources for Learning



Collaborators



VUE
Authorized
Test Center



HUAWEI



ACADEMY
FORTINET®



Q & A