



AVERIX

Very Large Scale Integration (VLSI)

MENTORSHIP PROGRAM

2 Months

WHO WE ARE?

The Starting Point For Your Career Path

We help undergrad and post grad students struggling to get industrial experience with our Training + Internship programs which help them to become corporate-ready individuals and possess the skillset to take on any challenges without any self-doubt.



Take the Right Turn, With Us!



Starting Point For Your Career Path

Our Mission & Vision

We help undergrad and post grad students struggling to get industrial experience with our Industry Grade Mentorship programs which help them to become corporate-ready individuals and possess the skillset to take on any challenges without any self-doubt.



Mission

Our aim is to become one of the most preferred education technology platforms across the globe.



Vision

We envision a world in which each student receives the effective, equitable, and engaging education they need to reach their full and unique potential.

Topics & Outcomes

Month 1	Basic and fundamentals of VLSI
Week 1	Introduction to VLSI Design Fundamentals
Week 2	Advanced Digital Circuit Design
Week 3	VLSI Layout Design
Week 4	Analog and Mixed-Signal Design

Month 2	Advanced and Hands- on Experience in VLSI
Week 5	Advanced VLSI Topics
Week 6	Testing and Verification
Week 7-11	Hands-on Practical Live Project Sessions
Week 12	VLSI in Artificial Intelligence

Lesson Plan

Week 1

Introduction to VLSI Design Fundamentals:

Overview of VLSI technology and its applications

Introduction to digital logic design and Boolean algebra

Basic semiconductor physics and MOS transistor theory





Week 2

Advanced Digital Circuit Design :

Advanced digital circuit design techniques:
RTL design, pipelining

Finite State Machines (FSMs) and algorithmic
state machines (ASMs)

Hands-on session: Implement FSM-based
traffic light controller using Verilog

Week 3

VLSI Layout Design :

VLSI layout design principles and tools overview

Design rules, layout constraints, and parasitic extraction

Live project session: Implement layout for basic CMOS gates and conduct DRC checks



Week 4

Analog and Mixed-Signal Design :

Introduction to analog and mixed-signal VLSI design

Basic concepts of analog circuit design and SPICE simulation

Hands-on session: Design and simulate basic analog circuits (e.g., amplifier, filter)

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Week 5

Advanced VLSI Topics :

Introduction to ASIC and FPGA design methodologies

FPGA architecture, programming, and verification

Live project session: Implement a digital system on an FPGA board



Week 6

Testing and Verification :

VLSI testing and verification techniques
overview

Scan chains, BIST, and DFT principles

Live project session: Design and implement
a simple BIST scheme for a digital circuit



Week 7-11

Hands-on Practical Live Project Sessions (1 hour per day) :

Sessions 19-27: Dedicated to various live project sessions covering different aspects of VLSI design and implementation.

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Week 12

VLSI in Artificial Intelligence :

- Introduction to Neuromorphic Computing and VLSI implementation
- Overview of hardware accelerators for AI inference and training
- VLSI architectures for neural networks: CNNs, RNNs, and DNNs
- Design considerations for implementing AI algorithms on VLSI chips
- Case studies of VLSI-based AI applications in edge computing and IoT devices
- Future trends and challenges in integrating VLSI with AI technologies

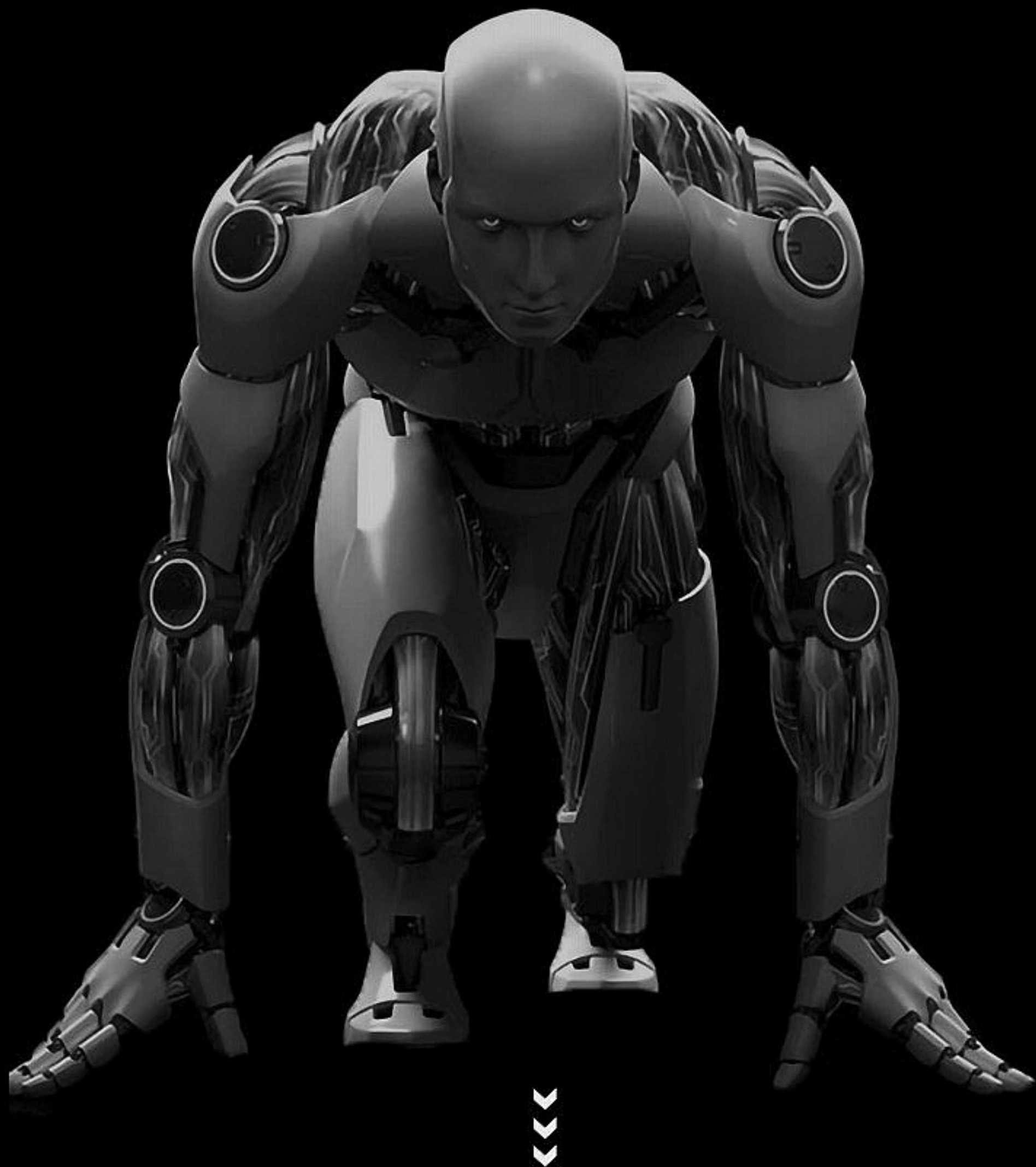
Our Collaborated Companies





Our Alumni Work At





SUPPLEMENTARY PERKS



Resume Building Session



Our Courses Give You Hands On Experience With
Mock Interviews

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