IBM AI Racing League
Mission Briefing

MISSION OVERVIEW: Design, Build, and Race an Autonomous AI Driver

This is a global competition for university students. Your primary objective is to build a high-performance AI race car using The Open Race Car Simulator (TORCS), Python, and IBM Granite AI models.

CORKSCREW CIRCUIT

KEY PARAMETERS

PLATFORM: TORCS (The Open Race Car Simulator)	CORE AI TECH: IBM Granite
LANGUAGE: Python	RACE TRACK: Corkscrew

STRATEGIC OBJECTIVE: More Than a Race, It's Your Proving Ground

IBM recognizes that great technologists are multi-dimensional. This league is an opportunity to showcase the critical skills that define top-tier industry talent.

AI Development Prowess

Apply cutting-edge AI models to a complex, real-time problem.

Team Collaboration

Contribute your unique skills towards a shared, ambitious goal.

Technical Communication

Explain complex concepts and your strategic approach effectively.

INDUSTRY-READY

TECHNICAL SCHEMATICS: Your Technology Stack

Section 1: The Simulator - TORCS

The Open Race Car Simulator provides a robust physics engine and environment for your AI to compete.

AI Car being run in TORCS

https://youtu.be/T7UJ1KXsPak

Section 2: The Brain - IBM Granite

IBM's generative AI models designed for code creation and software development. You'll learn to leverage Granite to troubleshoot and build your driver's logic.

IBM Skills Build intro to IBM Granite

https://ibm.biz/TORCSnewGraniteSW

SYSTEMS CHECK: Platform & Installation Protocols

Latest version of Python 3.x.x

Windows (Recommended)

- Full native support.
- **Quick Start Guide**: Step-by-step instructions.
- **Link**: https://ibm.biz/TORCSQuickStartExt

Latest version of Python 3.x.x

macOS

- Requires the use of Wine. Please check that you are permitted to use this on your machine.
- **WineHQ**: https://www.winehq.org/
- **MacOS Extra Steps Guide**:
- https://ibm.box.com/v/MacOSExtraExt

ASSEMBLE YOUR SQUAD:

Team Formation Parameters

Core Requirement: Form a team of 3 to 5 students from your university.

Rationale: The challenge is designed to foster collaboration, mirroring how high-performance teams operate in industry. Each member will play a crucial part.

Action: Register here:

https://ibm.biz/RegistrationTORCS

ENGAGEMENT PROTOCOL: Your Roadmap to Race Day

Phase 1: Mobilize & Learn

1. Register your Team:
https://ibm.biz/RegistrationTORCS

2. Join Discord
https://discord.gg/KXhqwKqnB2

3. IBM Skills Build Granite
https://ibm.biz/TORCSnewGraniteSW

Phase 2: Build & Execute

4. Install & Setup
https://ibm.biz/TORCSQuickStartExt

5. Employ IBM Granite
https://ibm.box.com/v/TorcsOllamaInstructions

https://www.youtube.com/watch?v=om7CPsX8HII

6. Code, test, execute

Phase 3: Document & Submit

7. Create lap video - from a standing start on Corkscrew track

8. Create team video - include team intro, approach to race, how you used IBM Granite and IBM Skills Build

9. Submit
https://ibm.biz/TORCSForm

SUBMISSION PACKAGE: Required Debriefing Materials

A complete submission must be made using the official Microsoft Form and include the following components:

Component 1: Fastest Lap Video

- A video showing only your single fastest lap.
- Your university and team name must be clearly visible for the entire duration.

Component 2: Team Introduction Video

- Introduce your university, your team members, and the part each person played.
- Detail your strategic approach and how you utilized IBM Granite and IBM SkillsBuild.

Component 3: GitHub Repository

- A link to your public GitHub repo containing your AI driver code.

Component 4: Race Details

- Your final race data as specified in the submission form.

Submission Portal: https://ibm.biz/TORCSForm

Differentiate your team – by adding a Blog

Differentiate your team by adding a link to a blog (eg Medium/Wordpress) of your teams journey
- Include in the blog a link to your lap video and your team video

Things to consider for your blog

1. Start with an intro into the project, what you are doing and why you are doing it
2. How this project aligns with your university learning?
3. Has this stretched you in terms of collaboration skills, new approaches, new technical skills?
4. How have you used IBM SkillsBuild (such as the IBM Granite courses)?
5. How have you used IBM Granite in your project?
6. How will this experience benefit you when you enter industry (team work, practical showcase of skills, etc)?
7. Describe the fun elements of this initiative
8. Describe the elements that will support you when you enter industry
9. End with a call to action – recommend a Skills Build course and provide the link

OPERATIONAL TIMELINE: Key Phases & Deadlines

YOUR MISSION IS A GO.

Assemble Your Team. Start Your Engines.

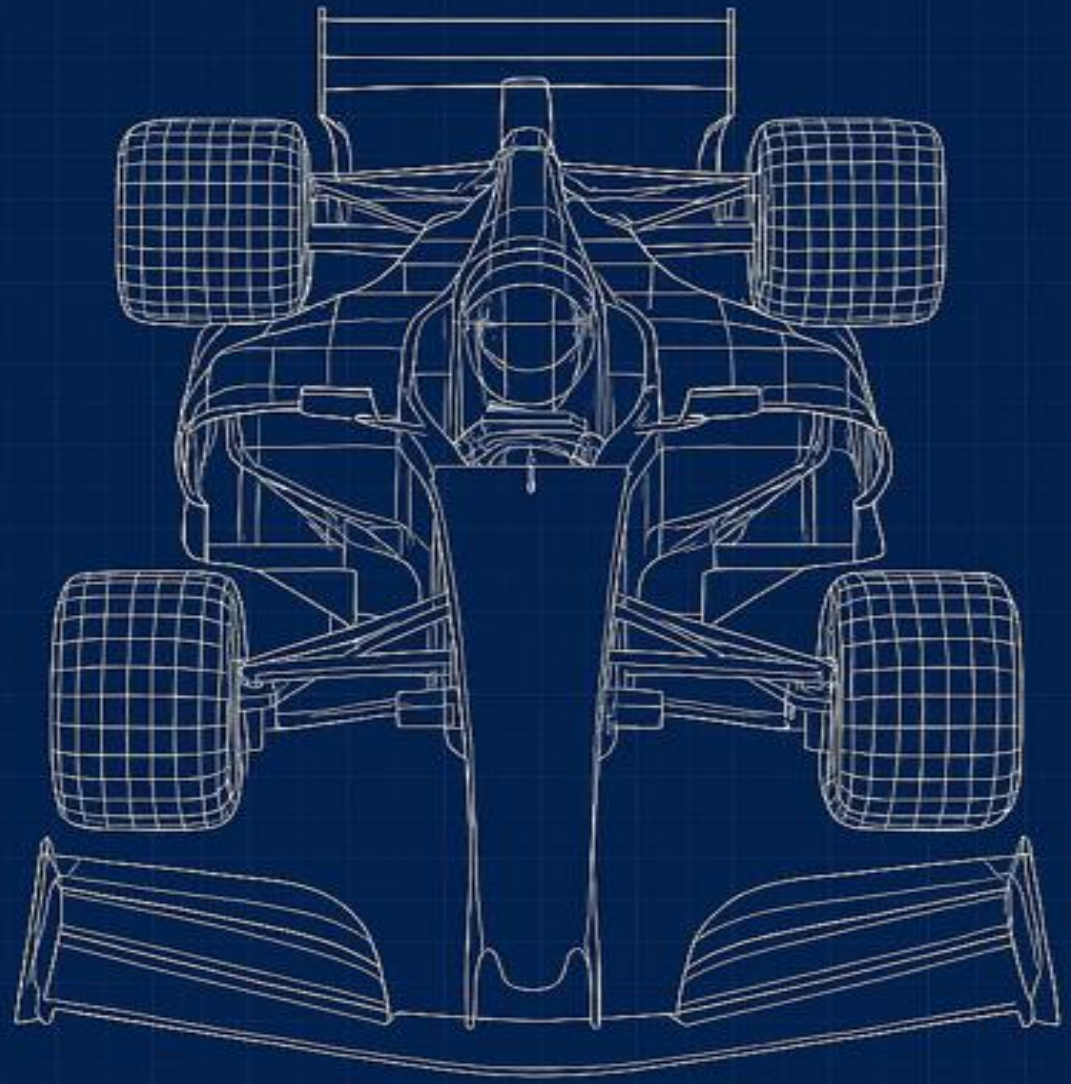
REGISTER NOW: https://ibm.biz/RegistrationTORCS

PREPARE FOR GREATNESS

SUBMIT YOUR ENTRY:

- INCLUDE YOUR VIDEOS
- YOUR GITHUB REPO
- RACE DETAILS

https://ibm.biz/TORCSForm



TECHNICAL ARCHIVES: Useful links

TORCS, BOT, RL, ML Reference - https://ibm.box.com/v/TORCSReference

AI Race League Registration - https://ibm.biz/RegistrationTORCS

AI Race League Submission - https://ibm.biz/TORCSForm