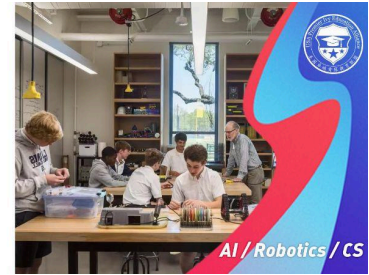# 🤖 Robotics & AI Summer Camp

## 🎯 Objectives

- **Master advanced skills** in designing and building robotic systems by integrating mechatronics hardware with AI-powered software.

- **Enhance creative thinking** and problem-solving abilities through immersive, hands-on projects.

- **Develop leadership, teamwork,** and communication skills through collaborative capstone projects.

## 🌟 Program Highlights

🔹 Empowering Future Innovators
Through our robotics and AI program, students gain the knowledge, skills, and confidence to explore the rapidly advancing world of intelligent technology and automation.

🔹 Exceptional Preparation for STEM Success
Students are equipped to excel in university-level research and prestigious STEM competitions such as the IEEE Micromouse Competition, Regeneron ISEF, and the Science Talent Search.

🔹 A Competitive Edge in College Admissions
This program helps students build impressive portfolios that showcase academic excellence, leadership, innovation, and a passion for STEM—making them stand out in the college admissions process.

🕐 **Dates & Schedule**

📅 Dates: July 7, 2025 – July 25, 2025
🕐 Time: 9:00 AM – 5:00 PM (with a two-hour lunch break)
📍 Location: **FDU (Fairleigh Dickinson University)** , **Teaneck campus**, **New Jersey**

**Weekly Format:**

- Monday–Thursday: In-person lectures and hands-on lab sessions

- Fridays: Field trips or online guest seminars

📘 **Course Contents**

- Week 1 (7/7–7/11):
  Robotics Basics – Arduino microcontrollers, sensors, motor control

- Week 2 (7/14–7/18):
  Advanced Topics – Raspberry Pi, computer vision, artificial intelligence

- Week 3 (7/21–7/25):
  Capstone Project – Students design, build, and test autonomous robots in **preparation for the IEEE Micromouse Competition at MIT in October 2025**

💵 **Tuition & Fees**

- Tuition: $600 per week

- Materials Fee: One-time $200 fee (includes a multimeter and full robotics kit for continued learning after the camp)

- Early Bird Discount: 10% off if registered by May 1, 2025

🎓 **Eligibility**

- Rising 9th–11th graders with strong academic performance

- Familiarity with AutoCAD, C++, or Python is helpful but not required

## 🤖 机器人与人工智能夏令营

### 🌟 项目亮点：

◆ 赋能未来创新者
通过机器人与AI课程，学生将掌握快速发展的智能科技与自动化领域的相关知识、技能与信心。

◆ 为STEM成功做好卓越准备
我们的学生将具备参与大学级研究和著名STEM竞赛的能力，如 IEEE 微型鼠标竞赛、Regeneron ISEF、科学人才搜索大赛等。

◆ 助力大学申请脱颖而出
该项目帮助学生打造优秀的个人作品集，展现学术实力、领导力、创新能力和对STEM的热情，为大学申请增添强有力竞争优势。

### 🕐 课程安排与时间表

📅 日期：2025年7月7日 ～ 7月25日
🕐 时间：每天上午9点至下午5点（中午两小时午休）
📍 地点：**FDU (Fairleigh Dickinson University)**，**Teaneck** 校区 新泽西
📅 每周安排：

- 周一至周四：现场讲座与实验操作

- 周五：实地考察或线上嘉宾讲座
  🔲 课程内容
- 第**1**周（**7/7～7/11**）：机器人基础 —— Arduino 微控制器、传感器、电机控制

- 第**2**周（**7/14～7/18**）：高阶内容 —— Raspberry Pi 单板电脑、机器视觉与AI

- 第**3**周（**7/21～7/25**）：毕业项目 —— 设计、建造并测试自主机器人，为**2025年10月在MIT举行的IEEE**微型老🐭走迷宫比赛做准备
- 💵 费用说明
- 学费：$600/周

- 材料费：一次性$200（包含万用表与机器人套件，可在课程结束后继续使用）

- 早鸟优惠：**2025年5月1日前报名享受9折优惠**

### 🎓 报名资格

- 面向即将升入9–11年级、成绩优异的高中生

- 熟悉 AutoCAD、C++ 或 Python 编程者优先（非必需）