

NeurIPS 2025 Call For Education Materials

IoT-MCP: Design and Control IoT Systems via LLMs

Tingjun Chen, Nortel Networks Assistant Professor

Yiran Chen, John Cocke Distinguished Professor

Department of Electrical and Computer Engineering, Duke University

National Science Foundation (NSF) AI Institute for Edge Computing (Athena)

Target Audience

High school students and undergraduate students interested in designing and interacting with Internet-of-Things (IoT) systems using AI and Large Language Models (LLMs)

Expected Reading Time

15 minutes

Contents Overview

Lecture notes · Lecture slides · Lecture video · Lab materials

Overview

This lecture provides an overview of integrating the Model Context Protocol (MCP) with Internet-of-Things (IoT) systems, demonstrating how Large Language Models (LLMs) can enable unified and secure control across a wide range of IoT devices. It introduces the fundamentals of IoT systems equipped with different sensors, explains the core concept and principles of MCP, and illustrates these ideas through a live example MCP server for sensor data collection—showcasing how MCP and LLMs can collaborate to streamline and enhance the development of IoT systems and applications.

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