# Lokesh Sriram

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## EDUCATION

**Carnegie Mellon University** **Pittsburgh, PA**
Masters of Science in Artificial Intelligence Engineering - Mechanical Engineering *Dec 2026*
*Coursework*: Sensing & Sensors, ML & AI for Engineers, Systems & Toolchains for AI Engineers, Modern Control Theory

**Purdue University** **West Lafayette, IN**
Bachelor of Science in Mechanical Engineering | *GPA: 4.0/4.0 (Highest Distinction)* *May 2026*
*Coursework*: Controls I&II, Heat & Mass Transfer, Fluid Mechanics, Modern Physics, Discrete Mathematics, Real Analysis
*Honors/Certificates:* Minor in Mathematics**,** ASHRAE Scholar, John Martin's Entrepreneurial Centre (JMEC) scholarship, H. William Bottomley scholarship, Ralph.T.Simon scholarship, Larry R Woodling scholarship, Dean's List

## SKILLS

**Controls & Sensing:** Model Predictive Control (MPC), Extended Kalman Filter, LabVIEW, VICON, D-Flow
**Hardware/Embedded:** ESP32, Raspberry Pi, Arduino, Linux, Modbus, Ethernet, PCB design/fab, PLCs
**Programming:** Python, MATLAB, C++, Java, ROS2, MySQL
**Simulation & CAD:** Siemens NX, Fusion 360, SolidWorks, STAR-CCM+, Modelica, Dymola
**Machine Learning & AI:** PyTorch, Tensorflow, Apache Spark, pgAdmin4, pSQL, Tight Learned Inertial Odometry
**Other:** FL Studio 21, ProTools, Machine Edition, Excel, Word, PPT

## PROFESSIONAL EXPERIENCE

**Control Systems Research Assistant** **Ray W. Herrick Laboratories, IN**
*Aug 2022 – Aug 2025*
- Created MPC for Vehicle to Home (V2H) EV charging, integrating HVAC and solar to minimize grid consumption and feedback
- Deployed IoT power-sensing system leading to $500 savings over TED Spyder and second author publication to ASHRAE Transactions
- Designed a Direct Current (DC) Lighting system and Raspberry Pi/C++ current data acquisition system, leading to 20% energy savings in comparison to traditional lighting system –led to lead author publication to Herrick Conferences 2024
- Built printed circuit boards (PCB) for custom smart switches – allowing for remote control of a 380 V DC bus

**Robot Control Systems Research Assistant** **TRACE Labs, IN**
*Jun 2024 – Dec 2024*
- Built data pipeline using motion capture system (VICON) and Treadmill (D-Flow) for robot motion profiles (Digit)
- Developed data loader in Python for TLIO and customized it to reduce motion sensor (IMU) drift by 40 cm per minute

**R&D Engineer** **Wilsonart, TX**
*May 2023 – Aug 2023*
- Initiated project for modeling of high-pressure laminate thickness as a function of parameters of press, decreasing amount material required -enabling annual $345,000 cost reduction
- Reported carbon and biogenic emissions across 77+ manufacturing locations, contributing to sustainability efforts

## PROJECTS

**TerraProbe: Soil Sample Collection Robot** **Purdue, IN**
*Jan 2025 – May 2025*
- Designed, machined, and assembled a 12" soil sampling robot to improve sample integrity for agricultural research
- Modeled force profiles, conducted motor/gear/shaft selection, and FEA using Python and Fusion 360 to achieve a factor of safety > 3.0

**Formula SAE: Aerodynamic Design Team** **Purdue, IN**
*Aug 2022 – Aug 2023*
- Mitigated drag by 6% by working on front splitter of FSAE car (validated in STAR CCM+), contributing to an overall 2nd in Michigan races 2022
- Implemented CAM for gantry, water jetting, milling, and laser cutting machines in Fusion 360 to machine molds, rear wing, and main body elements

**ParkVue: Startup Pitch Competition** **Purdue, IN**
*Jan 2023 – May 2023*
- Pitched a device using IoT enabled cameras to facilitate and ameliorate real-time parking management and tracking
- Led a team in the John Martin's Entrepreneurial Centre (JMEC) Startup Incubator competition and won $10,000