# PREMKUMAR RAMESH

## CAD AUTOMATION ENGINEER I CAD DEVELOPER I SOLIDWORKS API

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## SUMMARY

**CAD Automation Engineer** with hands-on experience building **AutoCAD macros (Auto LISP/Visual LISP)** and **Excel automation tools** to reduce repetitive drafting tasks. Skilled in rule-based CAD automation, drawing standardization, and engineering documentation support. Mechatronics Engineering graduate focused on improving design productivity through automation.

## WORK EXPERIENCE

### Associate Engineer - Automation

**ACO Technology Centre**    📅 02/2025 - Present    📍 Bengaluru, India

- Developed **AutoCAD (Auto LISP/Visual LISP)** and **SolidWorks API macros** to automate bar/mesh grating drawing generation.
- Built parameter-driven CAD tools to standardize **layers, dimensions, and annotations**, improving drafting consistency.
- Led automation-driven process improvements to streamline configuration and documentation workflows.

### Graduate Engineer Trainee

**ACO Technology Centre**    📅 02/2024 - 02/2025    📍 Bengaluru, India

- Supported SolidWorks part/assembly modeling and design updates to improve readiness for design reviews and manufacturing release.
- Assisted in maintaining engineering documentation and ensuring model/drawing consistency across product variants.
- Performed basic DFMEA support and quality checks to validate design outputs and reduce potential design risks.

### Intern- design

**ACO Technology Centre**    📅 08/2023 - 02/2024    📍 Bengaluru, India

- Worked on SolidWorks for Design of drainage channels and gratings for diverse load classes and site applications.
- Prepared production-ready drawings for multiple channel and grating types using different material specifications.
- Supported design, drafting and documentation activities for drainage channel and grating products.

## EDUCATION

### Bachelor of Engineering

**Sri Krishna College of Engineering and Technology**
📅 09/2019 – 04/2023    📍Coimbatore

- Mechatronics Engineering

## LANGUAGES

English    Professional    Tamil    Native

## INTERESTS

Reading    Cricket

## KEY ACHIEVEMENTS

### AutoCAD and SolidWorks Automation

Delivered rule-based CAD automation using **AutoCAD Auto LISP** and **SolidWorks API macros**, reducing manual drafting effort by **~90%** and improving drawing standardization.

### Excel Workflow Automation

Automated productivity reporting through **Excel VBA Macro**, enabling faster tracking, better reporting consistency, and improved project visibility, eliminating manual entry previously handled by a **15-member team**.

## SKILLS

AUTOLISP    VISUAL LISP

SolidWorks API    EXCEL VBA

AUTOCAD    SolidWorks    Python

## PROJECTS

### Soil Moisture Content detecting rover

📅 01/2022 - 06/2022

Design and Fabrication of Soil Moisture content detecting rover with irrigation system

- Designed and fabricated a soil moisture monitoring rover integrated with an irrigation support system.
- Implemented soil moisture sensing using probe-based measurement and validated performance through field testing.
- Performed component selection, assembly, and testing to ensure reliable sensing and system stability

### IoT-Based Sugarcane Harvesting Bot

📅 12/2022 - 04/2023

Design and Fabrication of IoT-Based Sugarcane Harvesting Bot

- Designed and fabricated an IoT-enabled harvesting prototype; created SolidWorks CAD assembly for mechanical structure and integration.
- Built control system using ESP32, ultrasonic sensor, and L293 motor driver with servo/DC motor actuation; validated performance through testing.