



# LCHVS ANIL KUMAR PONNAGANTI

SENIOR ENGINEER

## CAREER OBJECTIVE

A dedicated and innovative professional with extensive experience in research and development within the automotive industry, seeking a challenging role to leverage expertise in designing and optimizing cutting-edge automotive technologies, driving innovation, and contributing to the advancement of sustainable and efficient automotive solutions.

## CONTACT

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## ACADEMIC QUALIFICATION

<b>B.Tech- ECE</b>	Aditya College Of Engineering,AP	CGPA: 7.5/10	(2019 to 2022)
<b>Diploma - ECE</b>	Aditya Polytechnic Colleges,AP	Percentage: 92.15%	(2016 to 2019)
<b>SSC</b>	SVSM ZPP High School,AP	GPA: 9.0	(2016)

## TECHNICAL SKILLS

### Model-Based Development & Embedded Systems

- ✓ MATLAB/Simulink
- ✓ Stateflow
- ✓ dSPACE TargetLink
- ✓ Embedded Coder & Automatic Code Generation
- ✓ MIL/SIL Testing
- ✓ MxAM (Model Examiner)

### Embedded Programming & IoT

- ✓ C Programming
- ✓ Arduino & Embedded Prototyping
- ✓ Python

### Software Tools & DevOps

- ✓ **Version Control** – Git (SmartGit), IBM ClearCase.
- ✓ **Application Lifecycle Management** (ALM) – Jira, Codebeamer, IBM ClearQuest.
- ✓ **Build Systems** – CMake, automated build pipelines.
- ✓ **Test Automation**  
TT Scripts, Python-based test frameworks.
- ✓ **IDEs & Debugging**  
– VS Code, Eclipse, MATLAB debugging tools.

### Web & Mobile Development

- ✓ **Web Design**  
Front-end development (HTML, CSS, JavaScript).
- ✓ **MIT App Inventor & flutter**  
Cross-platform mobile app prototyping.

### Hardware & PCB Design

- ✓ **PCB Design**  
Schematic, simulation, layout design, and prototyping (Altium/KiCad).

## WORK EXPERIENCE

### **Senior Engineer (2025.04 - current)** at ZF TCI, Hyderabad **Responsibilities**

- Designed Simulink/Stateflow models from ClearQuest requirements
- Developed advanced features (Use Case/Sequence Function Coordinators)
- Generated production code using TargetLink
- Conducted MIL/SIL testing with MES Test Manager
- Performed static code analysis (CATM) for compliance

### **Engineer (2022.07 - 2025.03)** at ZF TCI, Hyderabad **Responsibilities**

- **Verification:** Develop the MATLAB-Simulink Models using DSPACE-Target Link, Code generation based on customer Requirements.□
- **Validation:** MIL-SIL Testing, MISRA, MAAB Guide lines and Integration Testing Using SOFTCAR Tool.
- **Other tools experience:** Clear Case, Clear quest, and JIRA to update the change Request information.

## PROJECTS

### ◆ **Humanoid Robot Project**

Advanced AI Robotics System

Developed full-body **humanoid** with prosthetic hand (5-finger articulation, 180° rotation)

**Implemented AI features:** voice assistant, face recognition, object detection (YOLO), and imitation mode

Designed autonomous mobility system with line-following and obstacle avoidance

**Created interactive features:** jaw-synced speech, touchscreen display (Raspberry Pi), web browsing capability

Built wireless communication system for remote control and data transfer

Utilized 3D printing for custom mechanical components

**Technologies:** Python, OpenCV, TensorFlow, Arduino, SolidWorks, Tinkercad, MQTT, HTTP

**Link:** [Click here to view projects](#)



scan here

### ◆ **AK Smart Home Automation Device**

(IoT Product | End-to-End Development)

- ✓ Multi-control: Bluetooth, IR, Wi-Fi, Google Assistant/Alexa
- ✓ Custom PCB: Designed & hand-assembled SMD components
- ✓ Cloud Backend: Firebase Realtime Database + Mobile App
- ✓ Impact: 40% cost reduction vs commercial hubs

### ◆ **IoT Smart Irrigation + Home Control**

(NodeMCU | Agriculture + Automation)

- ✓ Soil moisture-triggered watering
- ✓ Real-time energy monitoring (Cayenne)
- ✓ Result: 30% water savings

### ◆ **Line-Following Robot**

(Autonomous Navigation)

- ✓ PID-controlled IR array
- ✓ 25% faster laps after tuning

### ◆ **Dual-Axis Solar Tracker**

(Renewable Energy Optimization)

- ✓ LDR sensors + Servo motors
- ✓ 35% more energy than fixed panels

### ◆ **Automatic Train Gate System**

(Embedded Safety Solution)

- ✓ IR sensors + Servo gates
- ✓ Acoustic collision alerts

## INTERNAL TOOLS DEVELOPED

- **UT Framework & Build Tool** – Automated unit testing & builds, cut testing time by 90%
- **Axivion Error Suppression Tool** – Reduced false positives in static analysis by 50%
- **CR Tracking Tool** – Streamlined change request management with automated reporting
- **MTest Tool Development** – Helped to create Enhanced Simulink model testing with automated test cases
- **Process Automation** – Saved 20+ hours/month via Python/TT scripts for repetitive tasks

## ACHIEVEMENTS

- Received ZF Spot Award-2025 for Best performance to create UT framework build tool
- Received ZF star team Award-2025 for Best performance
- Given Guest lecture on "Introduction to MATLAB" at Aditya College of Engineering, AP in 2024.
- Won 2nd prize in project expo at Aditya intra competitions in VEDA 2K18.
- Won 1st prize in Kabaddi Tournament at Aditya Intra Moral Games in 2K18.

## CERTIFICATIONS & COURSE COMPLETION

- MTA Certification HTML5 Application Development
- Fundamentals IoT Fundamentals: Connecting Things

## HOBBIES

- Fixing broken electronics
- Building gadgets from scrap parts
- Working on DIY projects
- Learning tech from YouTube
- Playing puzzle games

## STRENGTHS

- Flexible and adaptable to any working condition
- Self-motivated and Hard work
- Self-disciplined, self-confident,
- Quick Learner

## EXTRACURRICULAR ACTIVITIES

- Participated in NSS
- Organized and participated in many Technical events.

## LANGUAGES

- Telugu
- English

## DECLARATION:

I hereby declare that the above given information is true to the best of my knowledge.

Place:

(P LCHVS ANIL KUMAR)