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.Tech- ECE	Aditya College Of Engineering,AP	|| CGPA: 7.5/10	(2019 to 2022)
Diploma - ECE	Aditya Polytechnic Colleges,AP	|| Percentage: 92.15%	(2016 to 2019)
SSC	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, Hyderbad
Responsibilities

- Worked extensively with TRACE32 and CANoe analyzer tools for debugging and communication analysis.
- Managed build automation and project configuration using CMake, additionally writing robust test cases for the New Takeover project.
- Gained practical experience and applied concepts related to AUTOSAR architecture for scalable and modular automotive software development.
- 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, Hyderbad
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 frame work 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

STRENGHTS

- 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

DECLERATION:

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