Anand Rajendran

Solution Architect - Automotive Embedded | Full-Stack | AI

Chennai, Tamil Nadu, India | +91-98843 99915 | rajendran.anand@live.com
www.linkedin.com/in/anand4585 | www.github.com/zollyzeus | www.anandrajendran.dev

PROFESSIONAL SUMMARY

- Solution Architect with 16+ years across safety-critical automotive embedded systems, verification & validation (V&V) leadership and modern full-stack/AI product engineering - rare cross-domain depth from ECM firmware and AUTOSAR platform validation to cloud-deployed AI applications.
- Led V&V/embedded software delivery for global OEMs and Tier-1s (Stellantis, Audi/Porsche via Harman, Nissan/Calsonic Kansei via L&T, Caterpillar via Infosys), including a 35+ member team, scaling organizations 3-4x, lifting automation test coverage from 35% to 75% and cutting test turnaround by 50%.
- Post-2023, earned a P.G. Diploma in Artificial Intelligence (CDAC Noida) and independently architected/shipped production-grade full-stack and AI projects.
- Seeking senior individual contributor or architect roles in AI-driven product engineering, full-stack development or automotive embedded / AUTOSAR product engineering and V&V. Open to fulltime, part-time, individual-contributor, consulting, contract, academic / training and start-up engagements (including equity-based initial compensation as co-founder / founding team member).

TECHNICAL SKILLS

Frontend: Next.js, React, TypeScript, JavaScript, HTML5, CSS3, Tailwind CSS, Bootstrap
Backend & APIs: Node.js, Python, Flask, FastAPI, REST APIs, SocketIO, AsyncIO, Gunicorn/WSGI, Nginx
Databases & caching: PostgreSQL, MySQL, Redis, Prisma ORM, SQLAlchemy, Elasticsearch, Supabase (Auth, Storage, Realtime, PostgREST), Row-Level Security (RLS)
Security & Auth: NextAuth, OAuth2/OIDC (custom provider), JWT, RBAC, PKCE, CSRF protection
Testing & Quality: Jest, Playwright, CI/CD automation
DevOps & Infrastructure: Git, GitHub, Docker, Docker Compose, Docker Swarm, Nginx, Traefik, Let's Encrypt TLS, AWS (EC2, RDS), Ubuntu Linux server orchestration, Jenkins, GitHub Actions, GitLab CI, ELK Stack, Prometheus, Grafana, Sentry, Alertmanager, WireGuard VPN
Integrations & Tooling: Razorpay, BigBlueButton, JupyterHub, VS Code, Cursor, Claude Code, GitHub Copilot

AI / ML: Scikit-learn, XGBoost, TensorFlow, PyTorch, Keras, YOLO, OpenCV, SpaCy, NLTK, NumPy, Pandas, PySpark, Matplotlib, Seaborn, Librosa, ASR/speech-to-text, OCR
Generative AI: RAG, LoRA fine-tuning, prompt engineering, multi-agent systems, Claude API, Google Gemini API, Ollama (self-hosted LLM)
Edge AI: Quantization, TinyML, TensorRT

Automotive Embedded: Embedded C, Linux system programming (POSIX, IPC), Altia, PyQt, CAN, UDS, SOME-IP, DoIP, Classic & Adaptive AUTOSAR (test)
Test Automation (Automotive): CAPL, VB.Net, C#, Python, Vector CANoe, Danlaw MicroMax, GAIO winAMS

Technical Project Management Agile Product Ownership & Tooling: RFQ, NPD & expansion proposals, estimation, hiring, initiation & ramp-up, planning, task tracking, resource utilization, QCD metrics monitoring & control, quality audit compliance, status reporting, technical project management, team scaling, risk management, vendor & stakeholder management, project closure
Agile Product Ownership & Tooling: SAFe, ART collaboration, backlog management, iteration / sprint planning & execution, continuous improvement, IBM DOORS, IBM ALM (Jazz), Microsoft Project

WORK EXPERIENCE

Independent & Freelance Practice - 2.5+ Years

Full-Stack Solution Architect · Greyin : Professional Networking Platform 01 Aug 2026 - Present · *Remote*

- Solo-built a multi-app professional networking and career platform - job board / hiring, freelance marketplace, developer community, technical blog, curated placement and a centralized admin hub - on Next.js, TypeScript and a self-hosted PostgreSQL backend (250+ schema migrations, 450+ RLS policies).
- Built AI-assisted candidate matching, interview preparation and content moderation / fraud detection using multiple AI providers (Claude, Gemini, self-hosted Ollama) with automatic fallback so features remain available during provider outages.
- Integrated Razorpay payments, real-time messaging and notifications, and a 300+ spec-file automated Playwright suite covering every core workflow before each release.
- Deployed to production on Docker Swarm with row-level database security (RLS) and a centralized admin analytics dashboard spanning all 7 apps.
- Link: www.greyin.net

Training Mentor · Edge AI / GenAI for Automotive Embedded 02 Feb 2026 - 30 Apr 2026 · *Remote*

- Developed an upskilling curriculum covering LLM fundamentals, RAG, fine-tuning, agents, Edge AI (quantization, TinyML, TensorRT) and GenAI production patterns for automotive embedded engineers.

Full-Stack Solution Architect · Edjitsu Learning Management System 01 Jun 2025 - Present · *Remote*

- GenAI-assisted development of production-grade **Edjitsu LMS** - (Next.js 14,TypeScript, PostgreSQL, Prisma, Redis) with AI chat tutor, live classes and a course marketplace for students, instructors and admins with 1,800+ automated tests.
- Designed and built a custom single sign-on (OAuth2/OIDC) system giving one secure login across 8 connected platform tools (Git, chat, video conferencing, analytics, e-learning labs, forums), removing separate logins and reducing account management overhead.
- Led a full-platform security audit and remediation - closed account-takeover, data-exposure and injection risks; added automated encrypted backups and real-time monitoring / alerting to reduce operational risk ahead of scale-up.
- Leading an AI/ML initiative (personalized course recommendations, at-risk-student prediction, AI tutoring) with a staged, safety-gated rollout; infrastructure on Docker Swarm with automated CI/CD (GitHub Actions + self hosted GitLab).
- Link: www.edjitsu.com / www.learn.edjitsu.com

Full-Stack Solution Architect · EmbeddedJobs Hiring System 01 Jun 2025 - Present · *Remote*

- Built **EmbeddedJobs**, a job portal (Python, Flask, MySQL, Redis, SocketIO) with RBAC, advanced search, skill matrix, real-time chat and notifications.
- Led a security audit and hardening pass for EmbeddedJobs and migrated production to a resilient multi-instance Docker Swarm deployment behind Traefik.
- Link: www.embeddedjobs.io

AI Engineer · Automatic Speech Recognition, CDAC Capstone 01 Jun 2024 - 30 Aug 2024 · *Remote*

- Built a deep-learning speech-to-text application (Keras, TensorFlow, Librosa) trained on Indian and international accent datasets; deployed on AWS as a web app using Flask, Docker and Jenkins.
- Link: www.github.com/zollyzeus/ASR-Deployment

Independent Consultant / SME · Automotive PM & Agile Transformation 01 Dec 2023 - Present · *Remote*

- Provided verification & validation RFQ and project-management support for Tier-1 clients; delivered Agile process workshops and live IBM ALM / Jazz demonstrations.

Professional Employment - 13.5 Years

Manager (Technical Specialist) · Stellantis (FCA IT) 29 Aug 2022 - 17 Oct 2023 · *Bangalore*

- Led a 35+ member team performing base software platform verification for MY26 ADAS / BCM high performance compute (HPC) units and zonal controllers (Classic AUTOSAR BSW and DoIP).
- Improved test automation coverage (Python, CAPL, XML) from 35% to 75% and reduced test turnaround time by 50%.
- Scaled the FCA IT Classic AUTOSAR BSW V&V organization 4x through hiring, ramp-up and competency development (FY22-23).

Solutions Architect (Principal Engineer I) · Harman Connected Services 12 Jul 2020 - 06 Jul 2022 · *Bangalore*

Manager (Consultant @ Harman) · Datamatics Global Services Limited 28 Aug 2020 - 09 Jul 2021 · *Bangalore*

- Owned SWE.6 / SWE.5 testing of an Adaptive AUTOSAR based instrument cluster (functional, middleware and DoIP) and the associated test automation for Audi / Porsche, Germany.
- Developed a CAPL, Python and C# / XML based test framework for DoIP and SOME-IP regression testing.

Deputy Manager (Project Chief) · Stellantis (FCA Engineering) 09 May 2016 - 26 Jul 2019 · *Chennai*

- Delivered instrument cluster software-in-the-loop (SIL) testing for HMI and functional verification - for NAFTA and EU vehicle programs of erstwhile Fiat Chrysler Automobiles (FCA) group.
- Owned instrument cluster component validation (HMI, functional and diagnostics) across 5 NAFTA vehicle programs; built and led a 10+ member team, scaling the V&V group 3x (FY18-19).

Senior Software Engineer / Project Leader · L&T Technology Services 17 Apr 2013 - 29 Apr 2016 · *Chennai*

- Developed TFT instrument cluster, head-up display and side-view camera software (Embedded C, Linux application, middleware and device-driver porting) for Calsonic Kansei, Japan (Nissan programs).
- Performed BCM unit testing and built a white-box test framework using GAIO winAMS and VB.Net.

Systems Engineer / Senior Systems Engineer · Infosys 17 Nov 2008 - 16 Apr 2013 · *Chennai*

- Ported middleware and HAL across Freescale MPC5xx and x86 platforms for engine/machine control module software (CAN, J1939, CDL, NVM, diagnostics, HAL) for off-highway vehicles of Caterpillar, USA.

EDUCATION

P.G. Diploma - Artificial Intelligence · Centre for Development of Advanced Computing (CDAC) 77.7% · 2024 · *Noida*
M.E. - Embedded System Technologies · Veltech Engineering College, Anna University 80.4% · 2008 · *Chennai*
B.E. - Electrical & Electronics Engineering · Jerusalem College of Engg, Anna University 78.8% · 2006 · *Chennai*
Intermediate (12th) · Vidhyasadhana Junior College, Board of Intermediate Education, AP 91.9% · 2002 · *Kadapa*
Secondary (10th) · Shanthiniketan High School, Board of Secondary Education, AP 80.2% · 2000 · *Kadapa*

AWARDS & RECOGNITION

- **Excellence Award** - Stellantis / FCA Engineering, *FY18*
- **Valuable Performer Award** - L&T Technology Services, *FY14*
- **Spot Award / Extra-Miler Award** - Infosys, *FY10 / FY11*

CAREER NOTE

Re-engaged with Stellantis in a Technical Specialist capacity to pursue hands-on AUTOSAR depth; as the role evolved away from technical into people management, took a deliberate decision to step back and pivot, completing a P.G. Diploma in Artificial Intelligence at CDAC Noida. Since then, started consulting on Agile and project management for automotive programs while building production-grade full-stack and AI projects independently - emerging with a broader, hands-on skillset that combines automotive embedded expertise with AI / ML and full-stack engineering.