

Joyal Jijo

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EXPERIENCE

Research Intern	Ukumi	Jan 2025 - Feb 2025
<ul style="list-style-type: none">Reduced learning curve for new users by redesigning the primary podcast editing feature with an intuitive, non-timeline-based workflow.Researched on-device AI inference using WebGPU & Transformers.js.Engineered a client-side solution to replace a costly API, cutting the feature's recurring costs to 0.		
React Native Intern	CliqueRaft	Aug 2024 - Nov 2024
<ul style="list-style-type: none">Built a cross-platform mobile application for both iOS and Android and a RESTful API backend using React Native, Expo, Node.js, PostgreSQL, and MongoDB, writing over 7,000 LOC.		

PROJECTS

CSI chapter MAIT website, Android App & Quiz Application	Website	PlayStore
<ul style="list-style-type: none">Led a team of developers to design, develop, and maintain the official website, an Android app, and backend for event management and live voting of performances. The quiz application was employed by 250+ participants.Technologies used: React, Next.js, Express, MongoDB, PostgreSQL, React Native, Expo		
GameSense		Git repository
Associated with Adobe Gensolve		
<ul style="list-style-type: none">Engineered a YOLOv5-based system for real-time player and ball detection at 30 FPS with 95% accuracy, incorporating interpolation for smoother motion tracking.Developed a mini court visualization tool for tracking key gameplay events like fouls, rallies, ball bounces.Technologies used: OpenCV , TensorFlow, YOLOv5, Pytorch, ResNet-50.		
Fantastic Robo		Git repository
Associated with Bajaj HackRx 6.0		
<ul style="list-style-type: none">Built an AI-powered RAG document system supporting 6+ formats (PDF, DOCX, XLSX, PPTX, images, emails)Agentic capabilities: Playwright-driven browser automation for search/navigation/form interactions and data capture; LLM writes/edits code, executes sandbox checks, and auto-deploys to GitHub (auto-commit + PR) with CI gating.Hybrid AI Decision Engine: recursive text chunking + HNSW vector search + BM25 re-ranking for pinpoint retrieval; dynamic top-k (25→10 on 300+ page PDFs).Technologies used: Bun.js, TypeScript, Elysia, Azure OpenAI, Mistral, Docker, Python(FastAPI, PyMuPDF), Playwright, Digital Ocean, Sentry, GitHub Actions (CI/CD)		

SKILLS

- Programming Languages:** JavaScript, TypeScript, Python
- Frameworks:** Next.js, Express, React Native, Expo, Tailwind
- Libraries:** Transformers.js, React, Redux Toolkit, React Router, NextAuth.js, JWT
- AI/ML:** TensorFlow, PyTorch, OpenCV , NumPy, Pandas, Scikit-learn, LangChain, Vector DB
- Databases:** MongoDB, PostgreSQL, Supabase, Appwrite, Firebase
- Languages:** English, Hindi, Malayalam

ACHIEVEMENTS

Adobe Gensolve '24 National Finalist (Top 6)

3rd Runner Up BAJAJ Hackrx 6.0 Awarded Larry Page Award for Best Innovation

Top 25 Pragati AI for Impact Hackathon, The /Nudge Institute, Bengaluru

2nd Prize @ BitByBit, Cognizance, IIT Roorkee

EDUCATION

2022 - 2026	B.Tech in AI & DS at Maharaja Agrasen Institute of Technology	(GPA: 8.33)
2021	Class 12th CBSE at St. Xavier's Sr. Sec. School	(88.6%)