Balaji Rao

ML Infrastructure Engineer

Gurugram, Harayana +919131716722 aryansofficial97@gmail.com https://art3miz18.github.io/Balaji_Rao

Profiles

Balaji Rao

Balaji-(art3miz18)

BalajiRao

art3miz

Summary

Vision-driven technologist with 5+ years of experience across Unity, immersive AR/VR, and machine learning ecosystems. Founding engineer on large-scale FinOps + AI projects, with a deep hands-on focus in ML deployment, DevOps, and microservices. Adept at leading teams and architecting scalable cloud-native systems. Currently pursuing a Master's in Applied Artificial Intelligence to further specialize in building AI-first products with engineering excellence.

Skills

Interactive Media & XR Development

Unity (AR/VR, 3D/Metaverse), React Three.js, Shader Graph, Blender, Substance Painter, Maya (Low-Poly & Game-Ready Asset Creation)

Machine Learning & AI Development

Python, FastAPI, OpenCV, PaddleOCR, Hugging Face, Amazon Bedrock, OCR systems, Virtual Try-On, Signature/Face Matching, RAG Chatbots

System Architecture & Cloud Platforms

Cloud-native microservices, REST APIs, ML deployment architecture, AWS (EKS, EC2, S3, CloudWatch), GitHub Actions, CNPG PostgreSQL

Frontend & UI/UX

JavaScript, AngularJS, MERN, figma, ReactJS, ThreeJS, gradio, streamlit, graphQL

Experience

Invincible Ocean | InvincibleMeta.AI — **Sep 2023 to Present**
Founding Engineer – FinOps + ML/AI Projects — Gurugram, Harayana
https://invincibleocean.com/

- **Team & Architecture Leadership**: Spearheaded a FinOps product stack integrating ML pipelines, observability, and cost optimization dashboards.
- **AWS EKS Migration & Automation**: Designed and executed the full migration to Kubernetes, authored Helm charts, and integrated CI/CD pipelines.
- **Custom LLM Hosting on Amazon Bedrock**: Leveraged Amazon Bedrock to host custom fine-tuned models and built production-ready inference flows.
- **ML/AI Microservices**:
  - Transformed ML modules (OCR, Virtual Try-On, Signature Match, etc.) into scalable Kubernetes services.
  - Enabled full observability via Prometheus, Grafana, OpenTelemetry, and cloud-native logging.
- **Unity XR Development**:
  - Led development of 7+ metaverse projects (e.g., Banking, Game Zones, Diwali Event) with avatar systems and data interactions.

Better Media and Tech — **Apr 2022 – Aug 2023**
Team Lead - Unity Developer — Noida, India

- Grew a Unity dev team from scratch and led delivery of multiple **Skyverse Metaverse** modules including malls, theaters, galleries.
- Delivered VR training for **Bridgestone Tyres**, integrating Unity with physical product education.

LogiClump Technologies — **Jun 2021 – Apr 2022**
3D Generalist — Noida, India
https://logiclump.com/

- Managed 10+ team members for 3D asset pipelines in games and a metaverse PoC.
- Ensured seamless game asset integration using Maya, Blender, and Unity.

Hashing Company — **Nov 2020 – May 2021**
3D Generalist — Hyderabad, India
https://www.linkedin.com/company/hashingcompany/posts/?feedView=all

- Built optimized hard-surface and organic models for games using Blender, Maya, Substance Painter.

Alfiehmr Technologies — **Nov 2018 – May 2019**
Frontend Developer — Chennai, India

Created interfaces using HTML/CSS/AngularJS and contributed to MERN stack projects.

Droid Sector — **Mar 2018 – Aug 2018**
UX Designer — Chennai, India

- Prototyped applications in Adobe XD; contributed to UI/UX research for startup tools.

Education

University of San Diego — **January 2025 - (Expected Oct 2026)**
M.S., Applied Artificial Intelligence

SRM University — **(2015 – 2019)**
B.Tech, Computer Science

Backstage Pass Institute of Gaming and Technology — **(2019 – 2021)**
PG Diploma, Game Art & Design

Publications

Simulation Of Path-Finding Using Evolutionary Techniques
Journal of Emerging Technologies and Innovative Research
https://www.jetir.org/papers/JETIR1903F63.pdf

Developed a real-time pathfinding simulation model that enables an object to dynamically traverse a grid-based environment from a start to an end position. The model integrates Breadth-First Search (BFS) with genetic algorithms to compute adaptive paths while avoiding obstacles. Each grid cell acts as a waypoint, with the path recalculated at each step, allowing the object to respond instantly to environmental changes. The system ensures continuous path optimization and robust navigation in dynamic maps.