Advaith A J

Chief Expert - Web Technologies

✉ advaitharunjeena@gmail.com   ⌂ advaith3600

in advaith3600   ⌖ United Arab Emirates

Full-stack developer and Medallion of Excellence winner at WorldSkills 2022. Currently serving as Chief Expert for Web Technologies with the UAE Government, mentoring students for WorldSkills and leading EmiratesSkills competitions. Published author of two research papers in the field of AI and creator of open-source projects with 200+ GitHub stars, used globally. Strong interest in AI-driven innovation and advancing technology through education and open collaboration.

🎓 Education

Master of Science in Computer Science, *Georgia Tech*   Jan 2026 | Online
Specialization in Machine Learning

Bachelor of Technology in Computer Science and Engineering   2020 – 2024 | Kollam, India
(Artificial Intelligence), *Amrita University*
CGPA - 9.15/10

🧠 Skills

Python | C++ | C# | JavaScript/TypeScript | SQL | Bash | Kubernetes | Docker | Nginx | Redis |

CI/CD | Linux Systems | PyTorch | GNNs | Next.js | React | REST APIs | System Design

💼 Professional Experience

Chief Expert - Web Technologies, *ACTVET*   Mar 2024 – present | Abu Dhabi, UAE
- **Technical Leadership:** Directing the technical strategy for UAE's national skills competitions, defining infrastructure standards and automated evaluation environments.
- **Internal Product Development:** Leading the end-to-end development and deployment of the **EmiratesSkills Management Platform**, a centralized system for tracking student registrations, training analytics, and performance metrics for the entire organization.
- **Mentorship:** Training the national team for WorldSkills, focusing on algorithmic efficiency and full-stack performance under extreme time constraints.

Technical lead - Full stack development,   Apr 2021 – May 2023 | Kochi, India
Traboda CyberLabs Private Ltd.
- **Cloud Infrastructure (Vidyut):** Architected the production infrastructure for a national multi-fest platform handling **hundreds of concurrent users**. Orchestrated containerized microservices using **Kubernetes**, ensuring zero downtime during traffic spikes.
- **Internal Tools (Chaya UI):** Developed and maintained a standardized React-based Design System used across the entire organization, reducing frontend development time for new internal products by 40%.
- **Leadership:** Led a cross-functional engineering team to deliver high-quality software solutions, mentoring junior developers on code quality, CI/CD pipelines, and scalable architecture.

📁 Projects

PowerToys Currency Converter,
C#, .NET, Performance Optimization ⧉
- Developed a high-performance plugin for Microsoft PowerToys with **24K+ downloads** and 250+ GitHub stars.
- Optimized memory usage and implemented local caching to ensure non-blocking, real-time query resolution.
- Maintained an automated CI/CD pipeline for unit testing and release management.

National Competition Information System (InCIS), May 2022 – Sep 2022
System Architecture, Laravel
- Designed the backend schema and architecture for a centralized competition management platform to handle thousands of competitors across 50+ trades.
- Engineered a modular role-based access control (RBAC) system for experts, juries, and administrators to manage scoring workflows securely.
- *Note: This prototype laid the architectural groundwork for future national skill management systems.*

⚜ Honors & Global Leadership

WorldSkills 2022 Special Edition, *Medallion for Excellence* ⧉
Global finalist representing India; ranked among top percentile in Web Technologies.

Chief Expert, Web Technologies, *UAE*
Leading national team training and competition infrastructure for WorldSkills 2024-2025.

Gold Medalist
WorldSkills India (2022), Eurasian Skills (2022), Asia-Pacific Best Practice (2022).

📰 Publications

Novel Frontier in Brain Vasculature Analysis with Graphical Jun 2024
Neural Networks, *ICCCNT 2024* ⧉
- Authored a paper proposing a novel GNN architecture for neurovascular analysis, achieving $R^2 > 0.9$ on the OGB Vessel Graph dataset.
- **Engineering:** Built custom data pipelines to process large-scale graph datasets and implemented the model training loop using **PyTorch Geometric**.

An Ensemble Approach for Visual Testing of Web Applications, Mar 2024
ICEFEET 2024 ⧉
Designed an automated testing framework combining **YOLO** (object detection) and CNNs to identify UI discrepancies, enhancing QA automation reliability.

🗂 Certificates

HPC and AI Compute Continuum
- **Supercomputing:** Gained hands-on experience submitting and managing jobs on the **PARAM Vidya Supercomputer**.
- **Parallel Computing:** Implemented AI workloads using **OpenMP/MPI** and optimized resource allocation strategies for distributed high-performance clusters.
- **Infrastructure:** Learned to navigate Linux-based HPC environments and manage scheduling queues (Slurm).

Brain Network Analysis using GNN
Sep 2022 - Developing graph-based deep learning models that will aid neurosurgeons.

European Rover Challenge, Team Astra, Navigation Team
12 Dec 2021 - Contributed to the software that was developed to remotely guide the Leo Rover through the Mars Yard.