



## **Job Position: Technical Architect**

### **About Arghyam**

Arghyam is a charitable organization set up in 2005 founded by Rohini Nilekani with the vision of Safe Sustainable Water for All. Over the last 18 years, Arghyam has supported Govt and civil society organizations in 140 projects in 22 states across the country in diverse areas of groundwater, springs, water quality and rural sanitation. The work and body of knowledge generated by partnerships has shaped policy narratives, launched national and state level programs while directly impacting the lives of over 6 million people.

Climate change will primarily be felt by humanity through water. The impact of climate change on water resources will lead to reduced freshwater availability, alteration of rainfall patterns, rising sea levels and saltwater intrusion, degraded water quality, impact on sanitation & health resulting in huge socio-economic impacts. These will be felt primarily by the most poor and vulnerable population. There is an urgent need to work towards climate resilience with a focus on water, at scale.

**Arghyam's approach for achieving its vision is to work on strengthening government systems using technology to implement participatory water security programs at scale.**

There is an exciting opportunity to participate in affecting societal impact in water! We are working on designing a unified, national technology infrastructure in collaboration with the ecosystem including national and state governments. A Digital Public Infrastructure (DPI) approach with common registries, common standards and open interoperable Application Programming Interfaces (APIs) will allow for innovation and choice of digital tools for the ecosystem while allowing them to leverage the existing infrastructure and observability of on ground processes to all the stakeholders from the communities to the center.

### **About the Position**

Join us at Arghyam for a transformative opportunity that not only promises professional growth but also the chance to make a profound societal impact. As we embark on supporting the national and state government departments to design a unified, national technology infrastructure for water, your role as a Technical Architect will be at the heart of pioneering a Digital Public Infrastructure (DPI). This initiative will reimagine the way the nation and states choose, build and innovate digital tools for achieving the vision of safe sustainable water for all.

You will be positioned at Arghyam Bengaluru Office to support the National and State Technology teams across the country. You will lead the technology initiatives at Arghyam and work closely with the various stakeholders, including the people who have designed and architected leading DPIs in the country, to

architect & design state-of-the-art services and APIs, build data registries and establish critical standards and specifications. Through your technology leadership, you will evangelize and promote the digital infrastructure with the ecosystem to enable innovations on top of the platform.

Be at the forefront of a transformational journey that not only aims to do something meaningful for society but also offers an unparalleled learning experience in emerging technology domains. Embrace the opportunity to leave a lasting legacy on a national scale, shaping the future of digital infrastructure in India.

## **Role of the Technical Architect**

As Technical Architect, you will be responsible for the overall technology architecture and design at Arghyam across all our engagements. Your Key responsibilities will include:

### **Key Responsibilities**

- Architectural Leadership:
  - Lead the architecture and design of all Arghyam engagements at both central and state governments.
  - Develop architectural blueprints and technical roadmaps.
- Solution Design:
  - Develop comprehensive architectural solutions
  - Build services, APIs, and data registries.
  - Ensure scalability, security, privacy and performance in designed solutions.
- Engineering Management
  - Overall responsibility of delivery, solution deployment and maintenance of the solutions.
  - Provide technical guidance and mentorship to development teams.
  - Conduct code reviews and technical assessments.
- Vendor Management:
  - Collaborate with vendors to ensure technology solutions are built correctly.
  - Oversee vendor performance and adherence to quality standards.
  - Negotiate technical requirements and ensure timely deliverables with vendors.
- Stakeholder Collaboration:
  - Work closely with stakeholders, including government officials, project managers, engineers, and DPI ecosystem.
  - Understand and translate stakeholder requirements into technical specifications.
- Innovation:
  - Drive innovation by researching and implementing new technologies and methodologies.
  - Evaluate emerging technology trends and their potential impact on projects.
- Evangelism:
  - Promote the digital infrastructure within the ecosystem.
  - Foster innovation and collaboration among partners and stakeholders.

- Represent Arghyam at industry events and forums.

## Skills

To effectively fill the role of Technical Architect, the candidate should possess a blend of technical, managerial and interpersonal skills.

### Technical Skills

- **API Design and Management:** Proficiency in designing, developing, and managing APIs. Knowledge of RESTful principles, GraphQL, API versioning, documentation tools like Swagger/OpenAPI.
- **Microservices Architecture:** Deep understanding of microservices architecture patterns, such as service discovery, containerization (Docker, Kubernetes), orchestration, and resilience. Experience in setting up monitoring and logging solutions for microservices-based applications. Familiarity with tools like Prometheus, Grafana, ELK stack (Elasticsearch, Logstash, Kibana), etc.
- **Open Source Frameworks:** Expertise in utilizing and customizing open-source frameworks and libraries relevant to the project requirements. This might include frameworks like Spring Boot (for Java), Express.js (for Node.js), Django (for Python), etc.
- **Cloud Technologies:** Hands-on experience with cloud platforms such as AWS, Azure, or Google Cloud Platform. Knowledge of cloud-native services like AWS Lambda etc.
- **Programming Languages:** Proficiency in one or more programming languages commonly used for backend development, such as Java, Python, Node.js, Go, etc.
- **Database Technologies:** Familiarity with various database technologies, both SQL and NoSQL, such as MySQL, PostgreSQL, MongoDB, Cassandra, etc. Understanding of database scaling and optimization techniques.
- **DevOps Tools:** Knowledge of DevOps principles and tools for CI/CD (Continuous Integration/Continuous Deployment), such as Jenkins, GitLab CI/CD, Travis CI, CircleCI, etc.
- **Understanding of Mobile Technologies:** Familiarity with mobile development platforms, frameworks, and best practices. Understanding of mobile development technologies such as Android (Java/Kotlin), iOS (Swift/Objective-C), cross-platform frameworks like React Native, Flutter, etc.
- **Data Streaming:** Experience in building event-driven architectures and implementing streaming data pipelines for processing large volumes of data in real-time. Proficiency in working with data streaming technologies for real-time data processing and analytics. Knowledge of streaming platforms like Apache Kafka, Apache Spark Streaming, etc.
- **Understanding of Machine Learning and Artificial Intelligence:** Familiarity with machine learning and artificial intelligence concepts, algorithms, and techniques. Ability to design and architect systems that incorporate machine learning models for tasks such as predictive analytics, natural language processing (NLP), recommendation systems, etc. Understanding of Large Language models and RAG databases. Understanding of the ethical considerations and best practices surrounding the deployment of AI/ML solutions.



- **Performance & Scalability:** Expertise in designing and implementing highly performant and scalable systems. Knowledge of performance optimization techniques at various levels of the application stack, including code optimization, database optimization, caching strategies, etc.
- **Security:** Understanding of security best practices for API design and microservices architecture. Knowledge of authentication and authorization mechanisms like OAuth, JWT, API key management, etc.
- **Agile Methodologies:** Proficiency in Agile software development methodologies and practices, such as Scrum, Kanban, etc.

### **Managerial & Interpersonal Skills**

- Skills in engaging and collaborating with diverse stakeholders, including technology partners and community leaders.
- Ability to negotiate and manage partnerships effectively.
- **Communication Skills:** Strong communication and collaboration skills to effectively communicate architectural decisions, solutions, and recommendations to both technical and non-technical stakeholders.

### **Qualifications**

- Minimum 10 years of experience with at least 3 years in Technology Architect role.
- Proven track record of architecting large scale technology systems.
- Excellent communication, and leadership skills.

*Join us in our mission to make a lasting impact on India's water security landscape. Your expertise and dedication will be pivotal in driving positive change and improving the lives of millions. If you are a dynamic leader committed to driving transformational change, we encourage you to apply for this role and be part of our journey towards a water-secure future for all.*

**Female candidates are strongly encouraged to apply.**

**Compensation:** Competitive and commensurate with experience and abilities.

**Location:** Bengaluru

**Reporting:** Chief Operating Officer

**Date of Application:** We are reviewing applications on a rolling basis. The position will remain open till a suitable candidate is found.

To apply for this post, please email your updated resume to: [jobs@arghyam.org](mailto:jobs@arghyam.org) with a mandatory subject line "**Application for the post of Technical Architect- Bengaluru**"