

# Chief Architect

Job # 05 - 080

## POSITION PROFILE:

Under the direction of the Executive Director, the chief architect establishes the strategic technical direction of Etudes. The chief architect is responsible for all aspects of technology, including the high-level architectural designing, construction, reconstruction, standardization, and modernization of the Etudes platform.

The ideal individual for the Chief Architect role loves technology; enjoys working hard, sets high standards and exceeds them. The chief architect is a stellar performer who takes a hands-on role leading our technology strategy to drive the Next Generation of Etudes projects, scalability and performance enhancements, and experimental prototypes to new and greater heights of innovation.

The chief architect must be well versed on various technologies and have zest for learning emerging technologies at all times.

## DUTIES AND RESPONSIBILITIES OF THE POSITION INCLUDE:

- Shape the end-to-end architecture and design, and work with the Executive Director and the development team to implement the next generation teaching, learning, and collaboration platform of Etudes, with a focus on superb usability, ease of use, rich functionality, scalability, performance, clustering, and high availability.
  - Drive technical direction and coordinate development priorities with the project lead and the development team. Prototype new features with project lead, and react to user feedback on existing and desired features.
  - Collaborate with UI designer on usability enhancements. Innovate to improve the Etudes production systems, configuration, and metrics to maximize efficiency.
  - Plan and implement short and long term strategies for retiring certain legacy tools and technologies, and integrating existing systems and new systems.
  - Lead the technical direction and integration of authoring, assessment, and collaboration tools of Etudes.
  - Provide oversight and guidance of new Etudes product initiatives, ensuring adherence to best practices.
  - Assist the domain expert in creating the business case.
  - Provide test points in the software being developed to assist testers in creating test cases for the software.
  - Provide advice on selection of appropriate hardware and deployment architectures for production system.
  - Track and document changes to software systems.
- Perform random code reviews to ensure that the developers adhere to the specified guidelines.
  - Evaluate overall system usage and performance, and design and implement improvements to software efficiency.
  - Own the documentation of the technology architecture – for both in-house and for adopters of Etudes solutions.
  - Serve as the chief technical resource and help define appropriate client support responses, as well as dealing directly with customers on high-level critical issues.
  - Maintain an ongoing awareness of emerging trends and developments in technology that could impact Etudes.
  - Participate in external standards organizations, community, open source development projects, panels, etc. that could enhance the Etudes image and reputation as well as provide vital information on technology trends, best practices and innovations which Etudes can adopt.
  - Oversee various responsibilities of project initiatives until the project is delivered and deployed successfully.
  - Provide technical leadership and contribute to distributed, cross-institutional open source software application architecture and design teams.
  - Architect to scale by feature and for change.
  - Keep it simple.
  - High-level mentoring of development team.
  - Perform other duties as assigned.

## DEMONSTRATED SKILLS AND ABILITIES:

- Commitment to the four principles of excellence: Passion, Professionalism, Persistence, and Patience.
- Ability to strike a right balance between *time*, *scope*, *cost* and *quality* when recommending project roadmaps.
- Ability to enforce and monitor the “agreed upon” policies and best practices across the Etudes development effort.
- Ability to switch between “macro” and “micro” visions effectively and efficiently, as time demands.
- Ability to create and demonstrate proof-of-concept on newer and emerging technologies.
- Ability to select easy-to-use, appropriate technologies and avoid getting carried away with fancy technologies.
- Ability to foresee, plan and mitigate any type of risk.
- Ability to analyze and resolve complex technical problems.
- Creation and delivery of detailed technical presentations.
- Exquisite attention to detail.

**MINIMUM QUALIFICATIONS:**

Evidence of some or all of the following qualifications:

1. Six to eight years experience as a lead software architect or senior developer, building scalable, server-side frameworks, from inception to delivery, with well-defined API's using Java.
2. Any combination equivalent to a Bachelor's degree in Information Systems, Computer Science, or related field.
3. Understanding of, sensitivity to, and respect for the diverse academic, socio-economic, ethnic, cultural, disability, religious background and sexual orientation of all human beings.

**PREFERRED QUALIFICATIONS:**

1. Six or more years experience in Java (core), J2EE (Servlets, JSP, EJB, JMS, and related), JavaBeans, Enterprise JavaBeans, and J2EEXML (DOM, SAX, XST, XSLT, DTD).
2. Experience with Service Oriented Architecture (SOA).
3. Experience with deploying J2EE rich and / or web client applications in a high-availability, clustered environment.
4. Experience with web services and middleware (JMS, Apache / Tomcat, BEA Weblogic, JBoss, Websphere, MQ series, CICS).
5. Experience with various computer platforms including UNIX, Macintosh, and Windows NT/2000/XP, and with quality assurance, performance-testing efforts.
6. Experience with development tools such as SVN, CVS, IDEs, Ant, Maven, and DocBook.
7. Experience developing and modeling relational database solutions, particularly MySQL and Oracle.
8. Experience with web frameworks, such as Struts, Spring, etc.
9. Knowledge of JSF or GUI experience using AWT, Java Swing.
10. Knowledge of Apache, and Tomcat architecture, installation, configuration and administration.
11. Familiarity with W3C, IETF, and IMS standards.
12. Expertise in lightweight, rapid development, agile methods.
13. Experience in estimating and measuring project velocity.
14. Ability to establish and maintain cooperative and effective working relationships with other members of a team.
15. Ability to communicate effectively both orally and in writing.

**WORKING CONDITIONS:**

*ENVIRONMENT:*

Combination of physical office and virtual office environment; regular hours

*PHYSICAL ABILITIES:*

1. Hearing and speaking to exchange information and make presentations.
2. Dexterity of hands and fingers to operate a computer keyboard.
3. Seeing to read a variety of materials.

DATE APPROVED: July 14, 2008