

R031 / JOB TITLE GUIDE / VERSION 0.1

ATM software engineer

An ATM software engineer develops the code and tests behind air traffic management technology. The core distinction from a broad systems engineer is sustained responsibility for software implementation and quality. Some employers combine those functions, so duties are more reliable than titles. Neither role authorises a person to control aircraft.

Other titles to compare: Air traffic software developer. Titles alone do not establish equivalent duties.

What the role does

- Implement and maintain software against agreed requirements.
- Review code and build reproducible tests.
- Investigate defects and document changes.
- Coordinate with systems engineers and users.

Where the work happens

Software development and controlled test environments. The examples are supplier posts in India and the United States, not airport customer-service jobs.

Employer example 1

Leidos • India • Lead Software Engineer - Air Traffic Business, R-00195026

Vacancy status unconfirmed not an offer • Checked 2026-10-27 [EMP1]

Category	What this employer states
Essential in this source	Relevant computing/engineering degree with experience; additional experience may substitute for the degree. Eight years relevant experience, or a master degree with six years; English fluency. Programming, algorithms, source control, APIs, testing, databases, cloud and AI/ML exposure.
Desirable in this source	Aviation, distributed/safety-critical systems, legacy integration and secure-development experience.
Other stated conditions	Pune-based experienced technical-lead post; no reliable posting or closing date shown.

One employer and role, not worldwide eligibility. Closed or undated examples do not establish current hiring.

Employer example 2

Leidos • United States • Systems, Integration and Software Engineer Intern, R-00194152

Vacancy status unconfirmed not an offer • Checked 2026-10-27 [EMP2]

Category	What this employer states
Essential in this source	Enrolment in a relevant degree programme and exposure to systems/software engineering or AI/ML. US citizenship and ability to obtain and maintain Public Trust clearance.
Other stated conditions	Same employer as EMP1, but a different country and student entry route; no confirmed closing date.

One employer and role, not worldwide eligibility. Closed or undated examples do not establish current hiring.

Desirable requirements are not separately classified here; do not infer that none apply.

PREPARE AND VERIFY

Separate requirements from preparation

Occupational education versus aviation authorisation: BLS describes typical software-developer education, not a personal aviation licence. The examples specify recruitment criteria; contractual software assurance and permissions for operational changes must be checked separately. [REG1, EMP1, EMP2]

Still to verify: Two examples are from one employer, not two independent employers. Current hiring status is unconfirmed for both.

Explore a realistic entry route

- Begin with one programming language, data structures, debugging and version control. Build these foundations through a credible study route suited to your circumstances; do not treat a short aviation-themed course as a substitute for the qualification in a target vacancy.
- Compare student, graduate and experienced advertisements separately. The India lead post cannot establish the threshold for an internship. The US citizenship and clearance conditions belong to that particular contract and are not worldwide software-career requirements.
- Look for evidence of software delivery, not just a list of tools. A small project with a readable specification, automated checks, documented limitations and peer feedback is more informative than an untested demonstration.
- Ask what induction covers: aviation context, development standards, configuration control and the boundary between a test environment and live service. Learning to code and being trusted to change an operational system are different stages.

Build evidence of your skills

- Build a harmless classroom application with invented data. Include requirements, tests, a change log and a short explanation of a bug you found. Do not connect experiments to real ATM systems or use confidential operational datasets.
- Review a small piece of your own code for error handling and ambiguous assumptions. Record what you changed, what tests support the change and what remains untested; do not present AI-generated work as personal experience.
- Write a plain-language explanation of why passing a unit test is not the same as showing an entire system is safe. Identify questions a reviewer would still need to resolve rather than claiming professional assurance competence.

Prepare for an interview

Reflection prompts only, not questions claimed to be used by an employer.

- Prepare a genuine example of diagnosing a defect and communicating its impact. Discuss evidence and uncertainty, not merely how quickly you wrote a fix.
- Ask how code review, integration testing, mentoring and release approvals work. Clarify the role's coding-versus-systems balance; these are preparation prompts, not actual employer interview questions.

Investigate possible next roles

Possible directions include senior software development, verification, technical leadership or systems integration. Each requires additional demonstrated capability; an internship is not a guarantee of permanent employment.

Sources and scope

[EMP1] [Leidos Lead Software Engineer - Air Traffic Business, R-00195026](#)

Vacancy status unconfirmed not an offer. India. Checked 2026-10-27.

[EMP2] [Leidos Systems, Integration and Software Engineer Intern, R-00194152](#)

Vacancy status unconfirmed not an offer. United States. Checked 2026-10-27.

[REG1] [US Bureau of Labor Statistics Software Developers, Quality Assurance Analysts, and Testers - Occupational Outlook Handbook](#)

Broad occupational description and typical education, not a licensing standard. Not an aviation-specific qualification rule or an eligibility assessment for India. Checked 2026-10-27.

Educational requirements guide, not operational instructions, professional approval or an employment guarantee. Verify current requirements with the relevant authority and employer. Examples are selective and date-specific. Check the full current vacancy and competent authority before choosing paid training or assessing eligibility. No personal medical, nationality or immigration assessment is made here. No job guarantee.