NOVARTIS

Robotics Engineer (m/f/d)

Job ID
REQ-10091741
Ноя. 05, 2026
Швейцария

Сводка

The Robotics Engineer will help translate the global strategic vision into a safe, secure, connected, and scalable laboratory of the future. The role will support the development, implementation, scaling, and lifecycle management of robotic solutions for e2e automated process developments incl. material movement, sample handling, laboratory workflows, and interactions between instruments, people, and digital systems. Bridging emerging technologies with scientific and operational needs, the engineer will move solutions from technology scouting and prototyping to reliable laboratory deployment. Working with local and global stakeholders across science, engineering, automation, digital, facilities, quality, IT/OT, and external partners, the role will support implementing a sustainable robotics ecosystem that improves productivity, quality, ergonomics, operational flexibility, and employee experience.

#LI-Hybrid
Location: Basel, Switzerland

About the Role

Key Responsibilities

- **Robotics strategy and roadmap:** continuously support to refresh the robotics technology roadmap within agreed governance, aligning use cases, infrastructure, technology choices, and capability building with the lab-of-the-future vision and relevant global standards. Incorporate market developments, vendor innovations, and operational feedback.
- **Use-case development:** Partner with laboratory users to map workflows, identify automation opportunities, define value cases, and prioritize solutions based on scientific benefit, safety, quality, feasibility, and return on investment.
- **System design and integration:** Design, build, prototype, and program robotic hardware, end effectors, sensors, controls, and software, including AI, computer vision, sensor fusion, motion control, autonomous navigation, modular mobile platforms, safety systems, laboratory instruments, and supporting applications.
- **Deployment and scaling:** Manage projects from initial concept and User Requirement Specifications (URS) through simulation, design reviews, vendor selection, factory and site acceptance testing, shop-floor installation, commissioning, qualification, handover, scaling, and lifecycle support. Deliver standardized, laboratory-ready deployment packages for evaluated technologies, with defined interfaces, documentation, training, and support arrangements.
- **Connectivity:** Enable reliable interfaces via e.g. API, OPC UA, or similar between robotic systems, laboratory equipment, building infrastructure, data platforms, and relevant laboratory information systems without vendor lock-in.
- **Safety, security and compliance:** Conduct risk assessments, implement fail-safe mechanisms, and embed machinery safety, collaborative-robot controls, cybersecurity, ergonomics, GMP expectations, ALCOA+ data-integrity principles, and other applicable industrial and regulatory requirements throughout the system lifecycle.
- **Optimization and troubleshooting:** Analyze sensor and performance data, diagnose mechanical, electrical, and software malfunctions, and continuously refine autonomous navigation, system reliability, and collaborative human–robot workflows.
- **Operational excellence:** Establish performance monitoring, preventive maintenance, spare-parts strategies, technical documentation, and continuous-improvement routines.
- **Shared standards and requirements:** Define reusable designs, interfaces, and engineering standards for shared laboratory work centers and robotic platforms. Own and update their User Requirement Specifications (URS) with users, distinguishing shared from platform-specific needs. Align local implementation with global practices so solutions can be replicated across laboratories and sites.
- **Robotics catalogue:** Maintain an up-to-date catalogue of evaluated and deployed robotic solutions and shared laboratory work centers, covering specifications, availability, readiness for deployment, ownership, approved interfaces, and lifecycle status.
- **Adoption and governance:** Work with laboratory users and relevant sites to pilot and adopt evaluated technologies, using feedback to update the roadmap. Report progress, value delivered, risks, and decisions to leadership and robotics governance groups. Support roadmap approval and regular technical coordination meetings.
- **Capability building:** Train laboratory and engineering colleagues, promote safe adoption, and build a community of practice around robotics and intelligent automation.
- **Technology scouting, vendors, and stakeholders:** Lead technology and market scouting across AMRs, AGVs, automated material handling, computer vision, automated inspection, vision-guided systems, and physical AI. Define vendor evaluation criteria, assess technical capability and solution readiness, and partner with Procurement on approved-vendor selection, procurement, and support arrangements. Collaborate with local and global IT/OT, engineering, digital, facilities, quality, laboratory teams, system integrators, and research or technology partners.

Essential Requirements

- Master’s degree in robotics, mechatronics, automation, computer science, or a related technical discipline.
- At least five years of hands-on experience deploying industrial robotics or automation solutions, including the design, programming, integration, commissioning, or maintenance of industrial or collaborative robotic systems.
- Proven ability to lead robotics or automation projects from technology evaluation and concept through implementation and operational support..
- Strong understanding of industrial operations, machinery safety, risk assessment, fail-safe design, maintenance, and continuous improvement. ALCOA+ data integrity, validation principles, and security protocols; practical experience in regulated laboratory, pharmaceutical, biotechnology, medical-device, or similarly controlled environments is strongly preferred.
- Strong project-management, stakeholder-management, communication, and influencing skills, with experience engaging local and global business partners, vendors, and multidisciplinary teams across science, IT/OT, engineering, digital, facilities, quality, and operations.

- Expertise in certifying and recertifying automation workcells for CE marking.
- Exposure to AI-enabled robotics and the ability to assess emerging technologies for practical, scalable laboratory applications.
- Fluent English, spoken and written.
- Proficiency in programming languages such as C++, Python, or Java
- Familiarity with human–robot collaboration and change management in operational environments.

Desirable Requirements

- Sound knowledge of kinematics, control theory, sensor fusion, computer vision, AI/machine learning, motion planning, and autonomous navigation.
- Experience with robot controllers, PLCs, industrial communication protocols, sensors, AMRs, AGVs, automated material handling, automated inspection, vision-guided systems, and system integration.
- Familiarity with CAD/CAM tools, rapid prototyping, simulation, design for robotic handling, and automated material-handling systems.
- Knowledge of laboratory automation, automated sample transport, scheduling or orchestration software, digital twins, or flexible manufacturing concepts.
- Experience in robotic frameworks or simulation environments such as ROS/ROS 2 and Gazebo.

Key Competencies

- Systems thinking and strong problem-solving skills.
- Hands-on, experimental mindset balanced with disciplined engineering documentation.
- Ability to communicate complex technical topics clearly to scientists, operators, leaders, and suppliers.
- Collaborative approach and confidence working across organizational boundaries.
- Curiosity about emerging technologies and sound judgment in distinguishing scalable value from novelty.
- Ownership, resilience, and the ability to progress work in an evolving environment.

Key Interfaces

Laboratory scientists and technicians; automation, data and digital teams; process and equipment engineering; facilities and building project teams; quality, health, safety and environment functions; procurement; IT/OT cybersecurity; equipment suppliers; system integrators; and external research or technology partners.

Benefits & Rewards

At Novartis, we’re committed to reimagining medicine together - and rewarding the people who make it happen.

Expected Annual Base Salary Range for role: 93,800 - 174,200 CHF

The base salary offered is determined based on gender-neutral objectives, such as relevant skills, competencies and experience in accordance with the Novartis pay setting policy and upon joining Novartis will be reviewed periodically.

In addition to your base salary, you may be eligible for a performance-based bonus depending on certain performance parameters.

The rewards of being part of our team go far beyond base pay and incentives. We also offer a variety of competitive benefits in kind to help you thrive personally and professionally, such as insurance plans, retirement plans, wellbeing resources and global recognition programs. In addition, we provide flexible and hybrid working options, where possible, and minimum 14 weeks paid parental leave.

Read our brochure to learn more about our global total rewards offering:

https://www.novartis.com/sites/novartis_com/files/novartis-life-handbook.pdf

Note: Benefits and compensation may vary by country and are subject to local legal requirements, including provisions of collective bargaining agreements where applicable. A full overview of your compensation package, including any relevant collective bargaining agreement details applicable to your role based on your employment location and Novartis employer entity, will be communicated separately to you during the application process.

Accessibility and Accommodation

Novartis is committed to working with and providing reasonable accommodation to all individuals. If, because of a medical condition or disability, you need reasonable accommodation for any part of the recruitment process, or to receive more detailed information about the essential functions of a position, please send an e-mail to diversity.inclusion_ch@novartis.com and let us know the nature of your request and your contact information. Please include the job requisition number in your message.

Why Novartis: Helping people with disease and their families takes more than innovative science. It takes a community of smart, passionate people like you. Collaborating, supporting and inspiring each other. Combining to achieve breakthroughs that change patients' lives. Ready to create a brighter future together? https://www.novartis.com/about/strategy/people-and-culture

Benefits and Rewards: Learn about all the ways we'll help you thrive personally and professionally.
Read our handbook (PDF 30 MB)

Primary location salary range
CHF93,800.00 - CHF174,200.00
Дивизион
Development
Business Unit
Development
Место
Швейцария
Сайт
Basel (City)
Company / Legal Entity
C028 (FCRS = CH028) Novartis Pharma AG
Functional Area
Research & Development
Job Type
Full time
Employment Type
Regular
Shift Work
No

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