



Job Title: Robotics Simulation & Control Engineer

Location: Shenzhen / London / Hybrid

Company: *Robosloth Technologies Ltd*

About Us

Robosloth Technologies Ltd is a UK-based robotics startup developing adaptive crawling and climbing robots for industrial inspection and maintenance. We merge mechanical creativity with intelligent control systems to build robots capable of navigating and operating in complex environments.

You'll work closely with our Robotics Testing Engineer to bring virtual models to life — validating algorithms, improving performance, and shaping real-world robot behaviour.

Role Overview

We are looking for a *Simulation & Control Engineer* who can rapidly prototype, simulate, and iterate robotic behaviours in a digital environment. This role bridges robotics simulation, control theory, and reinforcement learning (RL). You'll build our robot's simulation model from the ground up, test controllers, and run learning pipelines to refine autonomous behaviours.

This is a *hands-on* role for a resourceful engineer — someone who enjoys problem-solving, building systems from scratch, and making real progress fast.

Responsibilities

- Develop and validate high-fidelity simulation models of multi-bodied robots in environments such as Gazebo, Isaac Sim, or Unity.
- Implement physics-based models (contact dynamics, actuators, sensors, environment interaction).
- Design and tune classical control loops (PID, impedance control, MPC) and integrate them with simulation.
- Apply reinforcement learning (RL) to improve control policies.
- Run experiments to validate control and learning performance, using simulation-to-real (sim2real) strategies.
- Collaborate closely with the Robotics Testing Engineer to align simulation with hardware constraints and sensor feedback.



- Document and present findings in a structured, reproducible format.
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Requirements

- Master's degree in Robotics, Mechatronics, Control Engineering, Computer Science, or related field.
 - Solid programming experience in Python and C++ (preferred).
 - Familiarity with ROS/ROS2.
 - Strong problem-solving and prototyping mindset — able to find clever workarounds and move quickly.
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Preferred (but not required)

- Experience with robotic kinematics/dynamics modelling tools (URDF, SRDF, Pinocchio, etc.).
 - Proficiency with at least one simulation platform: Gazebo, Isaac Sim, or Unity.
 - Background in sim2real transfer or hardware-in-the-loop testing.
 - Experience with optimization-based control or trajectory planning.
 - Understanding of control systems and basic RL frameworks (e.g., PyTorch RL, Stable Baselines).
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Personal Attributes

- Independent, curious, and execution-oriented.
 - Thrives in a fast-moving, startup environment.
 - Pragmatic — focuses on getting things working before perfecting them.
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What We Offer

- Early-stage ownership potential under the company's Equity Incentive Plan (EIP).
- Flexible, output-driven work culture.
- Opportunity to move into a senior technical or leadership role as the company scales.



机器人仿真与控制工程师 (Simulation & Control Engineer)

工作地点：深圳 / 伦敦 / 混合办公

公司名称：树懒科技

公司简介

树懒科技是一家来自英国的智能机器人初创公司，专注于研发具备“爬行与攀爬”能力的自适应机器人，用于工业检测与维护领域。

我们致力于将机械设计的创造力与人工智能控制算法相融合，让机器人在复杂环境中具备真正的自主性与灵活性。

如果你热爱机器人、热衷解决困难问题、希望从零打造下一代智能硬件产品，这里将是你最具挑战与成就感的舞台。

岗位职责

- 负责建立高精度的机器人仿真模型（如 Gazebo、Isaac Sim、Unity 等）。
- 实现物理仿真模块，包括接触动力学、执行器、传感器及环境交互。
- 设计与优化控制算法（PID、阻抗控制、MPC 等）并集成到仿真平台。
- 使用强化学习（RL）或模仿学习进行控制策略优化。
- 进行仿真实验与 sim2real 转换研究，提升真实控制效果。
- 与机械及软件工程师紧密协作，确保仿真模型与硬件特性匹配。
- 输出高质量的技术文档与实验报告，保证可复现性与技术沉淀。

任职要求

- 硕士学历，机器人学、机电一体化、控制工程、计算机科学等相关专业。
 - 精通 Python，具备 C++ 编程经验者优先。
 - 熟悉 ROS/ROS2 系统与机器人仿真环境。
 - 具备扎实的控制理论基础与较强的算法实现能力。
 - 思维灵活、动手能力强，能在资源有限的环境下高效推进项目。
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优先条件

- 熟悉 URDF、SRDF 等机器人建模工具。
 - 有强化学习框架（PyTorch RL, Stable Baselines）经验。
 - 具备 sim2real 转换、硬件在环测试或轨迹规划经验。
 - 有多体动力学建模、优化控制或智能决策研究背景。
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我们希望你是这样的人

- 热爱机器人技术，善于独立思考与解决问题。
 - 能在快节奏的初创环境中快速学习与落地。
 - 注重执行力，先让系统“能跑起来”，再去完美化。
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我们提供

- 公司早期股权激励计划（EIP），与公司共同成长的机会。
- 与创始团队直接合作，深度参与核心产品研发与技术决策。
- 灵活的结果导向型工作氛围，重视创造力与自我驱动。
- 快速晋升空间：随着公司成长，可发展为核心技术负责人或团队主管