

# Job Description

Role: **Technical Lead**

Company: **FirstStep.ai (head office: Mauritius)**

-  Region: EMEA (Europe, Middle East, Africa)
-  Job Type: 12 months contract (full-time, remote)
-  Minimum Degree: Masters in Engineering or Computer Science
-  Skills: Python, AI/ML, EDGE, Cloud, Mobile computing
-  Salary Range: \$3,000 - \$4,500
-  Soft Skills: Fluent English, Professional, Articulate, Collaborative, Self-Motivated
-  Scope of Work: Client Projects, Solution Prototyping, Product Enhancements
-  Company Values: Integrity, Excellence, Innovation
-  Closing Date: Monday 11th September

Revision: **2023-08-24**




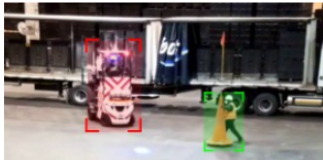


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# 1) Background

FirstStep.ai is at the forefront of industrial transformation, offering AI-powered software solutions for Production, Maintenance, Quality, and Safety. Working with large manufacturing companies and smart cities, we leverage our technology to optimise processes, enhance performance, and elevate quality.

Production Intelligence >	Maintenance Intelligence >	Quality Intelligence >	Safety Intelligence >
			
<div>Intelligent Product Inspector Intelligent Closed-loop Control Intelligent Production Forecasting Intelligent Production Reporting Intelligent Operator Logbook Intelligent Shift Handover</div>	<div>Intelligent Asset Performance Modelling Intelligent Anomaly Detection Intelligent Maintenance Planning Intelligent Resource Planning</div>	<div>Intelligent Production Quality Intelligent Mobile Operator Rounds Intelligent Mobile Laboratory Collection Intelligent Document Digitization</div>	<div>Intelligent Man-Machine Separation Intelligent Hazardous Area Alert Intelligent Fall Detection Intelligent Incident Prediction</div>

Guided by values of Integrity, Excellence, and Innovation, we offer quick-time-to-value solutions, turning your vision into reality and setting new industry standards. Our state-of-the-art AI Design tool, the FirstStep.ai Designer, is a user-friendly, no-code platform enabling the rapid training and deployment of visual Machine Learning (ML) models to cloud, servers, on-prem, EDGE, and mobile devices.

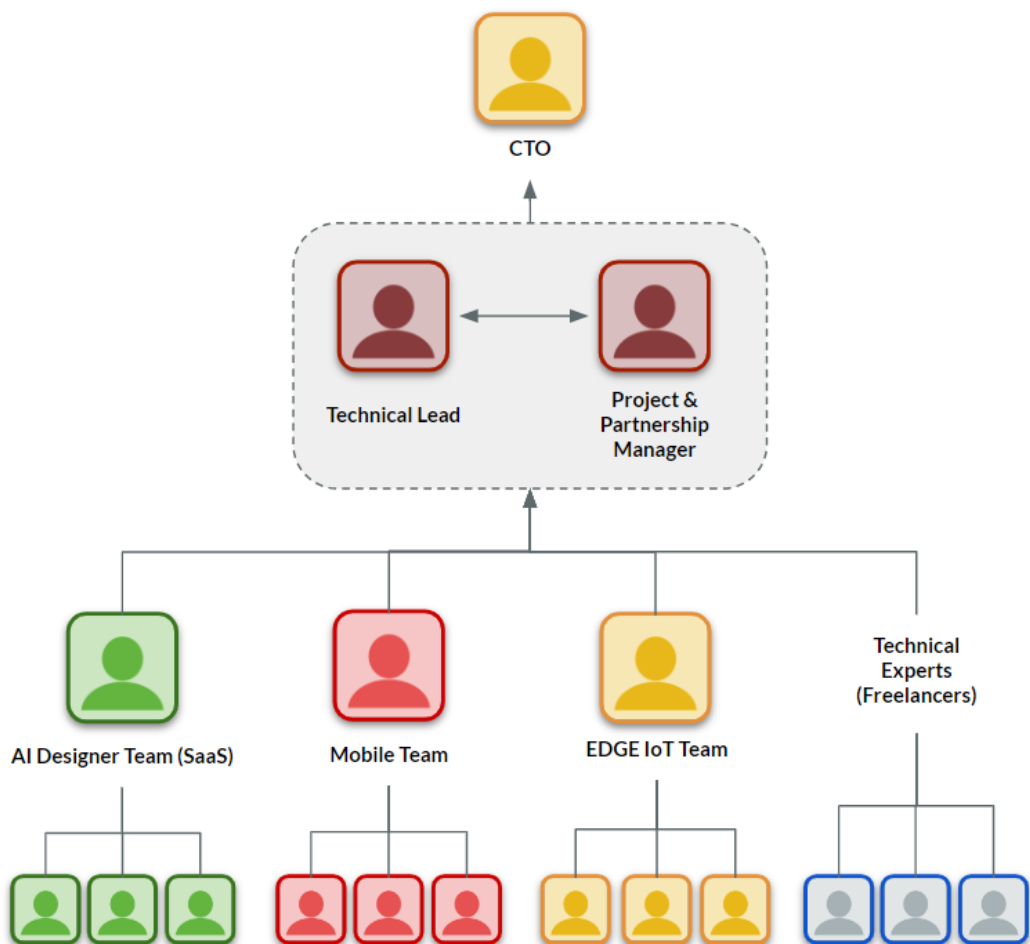
Our head offices are based in Mauritius, and we have a global team of 25+ staff, and a network of technology and delivery partners across Europe, Africa, India and Australia. For more information, visit: [firststep.ai](https://firststep.ai)

## 2) Job Description

FirstStep.ai is currently in search of an innovative and skilled **Technical Lead (EMEA region)** to join our team, initially on a 12-month contract with the potential for full-time employment.

This person will serve as a pillar of **technical excellence** and **innovation** within the company, responsible for guiding product and application design, driving research and development initiatives, and ensuring the delivery of top-quality solutions.

The Technical Lead will collaborate closely with our various development teams, including mobile, cloud SaaS, EDGE engineering teams, and top-class freelancers, and will report to the CTO. Working alongside the Project and Partnership Manager (PPM), they will harmonise the technical and project management aspects of our projects.



### 3) Academic Background

We are specifically looking for someone with the following academic background:

- ☒ **Masters (MSc)** in Electrical Engineering, Mechatronic Engineering, or Computer Science.

### 4) Work Experience

We are specifically looking for someone with the following work experience:

- ☒ **Engineering Experience:** Minimum of 3-8 years in a related field such as Electrical Engineering, EDGE computing, Cloud Computing, or AI/ML development.
- ☒ **Product Design & Development:** Experience in overseeing application and product design, from concept to final product, including prototyping and optimization.
- ☒ **Technical Leadership:** Proven record of providing technical guidance and support to development teams, ensuring adherence to best practices and quality standards.
- ☒ **R&D Initiatives:** Hands-on experience in spear-heading research and development projects, driving innovation, and exploring new technologies and methodologies.
- ☒ **Platform Development:** Experience in Windows application development, Android development, Python programming, and Linux system administration.
- ☒ **Cloud Services:** Familiarity with cloud computing platforms such as AWS and Azure, including deployment, monitoring, and maintenance.
- ☒ **Company Size:** Experience working in both small and large companies;

## 5) Technical Skills

We are specifically looking for someone with **strong technical skills** and **experience** as follows:

- ☒ Electrical Engineering (light current)
- ☒ EDGE computing (NVIDIA Jetson or similar)
- ☒ Cloud Computing (AWS, Azure)
- ☒ Servers, Cameras, Networking (system design, connectivity, remote support, debugging)
- ☒ Visual AI/ML models (e.g. object detection, segmentation, classification, pose)
- ☒ Process data AI/ML models (e.g. multivariable modelling, forecasting, anomaly detection)
- ☒ AI model datasets, training, validation, accuracy measures
- ☒ Python (including modules: numpy, opencv, tensorflow, keras, pytorch)
- ☒ COLAB / Jupyter Notebook
- ☒ Virtual Environments / Containerization
- ☒ Image pre-processing and manipulation (CPU and CUDA)
- ☒ Operating Systems: Linux and Windows 10 / 11
- ☒ Android / iOS development (familiarity)

## 6) Soft Skills

We are specifically looking for someone with **strong soft skills** in:

- ☒ **Fluent English:** Proficiency in written and spoken English.
- ☒ **Clear Communication:** Ability to articulate ideas and instructions unambiguously.
- ☒ **Collaborative Teamwork:** Works effectively with different teams and stakeholders.
- ☒ **Self-Motivated/Driven:** Demonstrates initiative and a strong commitment to achieving goals, with the ability to work independently and pursue continuous improvement.
- ☒ **Innovative Thinking:** Ability to think creatively and develop novel solutions.
- ☒ **High Attention to Detail:** Focus on the finer details to ensure quality and precision in work.
- ☒ **Adaptive Learning:** Quick to learn and adapt to new technologies and methodologies.
- ☒ **Problem-Solving Attitude:** Embraces challenges with a solution-oriented mindset.
- ☒ **Punctuality:** Commitment to meeting deadlines and being on time for meetings.
- ☒ **Professional Conduct:** Demonstrates respect and integrity in all professional interactions.
- ☒ **Able to Switch Between Projects:** Flexibility to switch and contribute to multiple projects.
- ☒ **Focussed:** Capacity to concentrate on complex technical tasks for 2-3 hours at a time without interruptions.
- ☒ **Setting personal boundaries:** Willingness to communicate when work demands become excessive, to ensure a high work quality.
- ☒ **Committed to Personal Health and Wellbeing:** Understanding of the importance of personal care, including taking necessary time off for rest and recovery.

This role is strictly technical, and does **not** require:

- ☐ ~~**Project Management:**~~ The Project Manager will handle all aspects of project planning and reporting.
- ☐ ~~**Team Management:**~~ There will be lots of team collaboration, but you will not be directly responsible for managing a team (e.g. team member performance reviews, hiring, or disciplinary actions).
- ☐ ~~**Client-Facing Sales:**~~ No requirement for sales presentations, marketing activities, or customer acquisition.
- ☐ ~~**Administrative Duties:**~~ No responsibility for office administration or non-technical operational tasks.

## 7) Role Breakdown

The responsibilities of this position will include:

- **40% - Client Projects**

- Drafting detailed technical specifications for new client projects;
- Implementation of client projects (collaborating with internal teams);
  - Training AI models using our internal AI toolkit, the [FirstStep.ai Designer](#);
  - Deploying AI models in our EDGE / Mobile / Server applications;
  - Deploying to Staging / Production environments;
- Attending clients meetings alongside the Project Manager (if required);

- **20% - Solution Prototyping**

- Prototyping innovative solutions (with direction from sales team);
- Benchmarking performance of product enhancements;

- **20% - Product Enhancements**

- Identifying recurring trends and client requests in projects;
- Recognizing opportunities for product/application enhancements to optimise products;
- Write a short technical spec (ticket) for the product teams;
- Verify and test new features once the product teams have released them.

- **20% - Sales / Business Development Support**

- Prototyping application workflow / pipeline to demonstrate concepts;
- Deploying online demos ([example](#)) as part of the business dev / sales cycle.



## 8) Example of a working day

A typical day could look as follows:

- ☑ 08:00 - 09:00: **[Client Project]** AI dataset annotation, and AI model training;
- ☑ 09:00 - 10:00: **[Client Project]** Adapt client application workflow to integrate new AI model;
- ☑ 10:00 - 11:00: **[Client Project]** Deployment Preparation (dry run in staging environment);
- ☑ 11:00 - 12:00: **[Client Project]** Production Deployment to EDGE device (production);
- ☑ 12:00 - 13:00: **[Solution Prototyping]** Prototype a new product concept;
- ☑ 13:00 - 14:00: **[Solution Prototyping]** Benchmark the algorithm for the new product concept;
- ☑ 14:00 - 15:00: **[Product Enhancements]** Write 1-page spec for the Mobile team to add a new feature;
- ☑ 15:00 - 16:00: **[Sales Support]** Add a new table field to an online demo, and deploy.

## 9) Contract Terms

### Hours & Timezone

We expect the candidate to work **8 hours** per day, **5 days** per week.

We expect the candidate to be online during hours: **9am - 5pm Mauritian time (GMT+4)**.

### Contract Period

There will be a **probationary period of 1 month**, followed by a minimum time commitment of 12 months.

Contract subject to annual renewal.

Note: After 12 months, your contract may be changed to a **full-time employment contract**.

### Contract Type

This is **not** a full-time employment contract.

The agency will enter into a **Work Agreement** with FirstStep.ai Limited (a company registered in Mauritius).

The candidate will be responsible for paying their own taxes.

FirstStep.ai Limited will not support VISA applications, and the agency applying will be responsible for ensuring that the candidate must have the right to work in the country they are working from.

### Communications

Your direct reporting line will be with a **Technical Director (CTO)** of FirstStep.ai.

We will hold a **weekly stand-up meeting** on a **Monday** to discuss work for the week ahead, and project progress, and ad-hoc meetings during the week as required.

All project progress will be tracked using tickets on a **Kanban ticketing board**, provided by FirstStep.ai.

You will be invited to join a **chat room** (e.g. Whatsapp / Microsoft Teams) to discuss any issues that come up outside of the weekly meetings.

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## Travel Requirements

- ☒ Remote (European timezone preferred)
- ☒ Occasional travel may be required
- ☒ Passport to easily travel to Europe/Africa/USA is an advantage

## Remote Work

- This is a **remote** position (home office).
- We expect the candidate the following resources:
  - ☒ Reliable power;
  - ☒ High-speed internet (minimum 20Mb line);
  - ☒ A dedicated work laptop, with secure login and hard-drive encryption;
  - ☒ A quiet and professional work space to hold meetings, without interruptions and distractions.

## 10) Interview Structure

The interview will take place over the next **4 weeks**,

Interview will have the following structure:

- Job Advertised: Friday 25th August 2023
- Application period: ~3 weeks
- Applications close: Monday 11th September
- Technical Assignment (2-3 hours): Monday 11th September (3 days)
- Technical Assignment Review: Thursday 14th September (3 days)
- 1 hour Interviews: Monday 18th - Wednesday 20th September
- Candidate Selection: Friday 22nd September

The selected candidate will be notified on **Friday 22nd September**, and would be asked to start as soon as possible.

## 11) Applications

If you believe you are a good fit for this role, and if you'd like to work for FirstStep.ai, then we invite you to apply.

Application submission: <https://forms.gle/8X8VbxPng1cJCSaH6>

We look forward to receiving your application.