Professional Profile – Job in South-France

**Algorithm Designer/ C++ Developer for an innovative R&D project: 3D data processing & MMI**

**Technical Skills:**
Programming Languages: C++ mandatory; Python, Java, Matlab appreciated.
Operating Systems: MS-Windows mandatory, Linux and Mobile environments appreciated.
IDE/SDK: Qt mandatory, VisualStudio and others appreciated.

**Goals of the project:**
3D real-time algorithms for: I/O, processing, modeling, rendering, analysis.
Integrated application hosting all processing algorithms and managed via an efficient Man-Machine Interface.

**Ideal candidate:**
Young Physicist, Mathematician, Data Scientist or IT Engineer having specific expertise in all technical fields required to accomplish subtasks of an IT project, oriented to real-time measurements and monitoring. The full list of skills required by the project follows. Ideally, the candidate:

- Has a solid experience in object-oriented programming for real-time algorithms. He knows the techniques to access and manage huge 3D-files (xyz + features). He has solid skills in mathematics to deal with multidimensional data. E.g. linear operations on vector spaces (3D geometry), linear / non-linear transformations, differential computing, finite element methods

- Has a direct experience in data analysis, applied to multidimensional data. E.g. general statistics, regressions (linear & non-linear), principal component analysis, Pearson's correlation, pattern recognition, machine learning

- Has solid skills in programming graphic cards, graphic accelerators and high-speed rendering techniques (GPU, CUDA …). He knows how to take 100% advantage of rendering performances under MS-Windows, to show (dynamically) several millions of points at high speed

- Knows how to build a (complex) turn-key MMI application, based on loading, processing, and rendering big-data files in real-time.

**Conditions & Context:**
To apply for this job, a candidate must:

- Have solid skills on at least two of the four areas above

- Have good theoretical skills in a third area

The candidate will join the three-to-four people project's team in charge of the whole job.

The job is initially established for the R&D phase only of the project, which will take 12 months. Depending on the results accomplished by the candidate during this phase, an extension may be possible. PhD or other academic solutions are also possible.

The tasks being complex and ambitious, the candidate must be highly self-motivated, proactive, engaged. The ability to put project's needs before his owns is a key factor for the success.

The workplace is Arles (South of France).

Good written technical English is mandatory (to read/write documents, source codes …). Basic English or French spoken is needed to exchange inside the team (Italian appreciated but not required).

Professional experience, in the mentioned domains, is appreciated but not strictly necessary. Remuneration & benefits commensurate with effective skills.

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