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| **Job title** | Signal Processing Engineer |
| **Reports to** | *VP of Software & AI* |

**Job purpose**

This Signal Processing Engineer will extend and improve the signal processing pipeline embedded in Ommatidia’s LIDAR and 3D metrology systems. This team member will advance methods to increase the accuracy, resolution, and speed of Ommatidia’s instruments, as well as to extract additional information, such as velocity, acceleration or vibration from raw signals. He/she will also support pipeline development in desktop tools for off-line post-processing of datasets and results visualization.

**Duties and responsibilities**

Marketing Tasks

* Produce technical materials for marketing purposes.
* Support marketing team in requirements capture and new product definition.

R&D Tasks

* Analyze hardware requirements for a given DSP project.
* Implement signal processing algorithms in FPGA/DSP.
* Optimize algorithm implementation for speed and resource usage.
* Develop 3D point cloud manipulation methods and tools.
* Create 3D data visualization tools.
* Validate and demonstrate the processing & visualization pipeline in case studies with real-world data.
* Produce high quality data visualization outputs for customers and/or publication.

Quality Activities

* Coordination with Quality department for R&D procedures.
* Produce documentation for QC, customer support, regulatory approvals.

**Qualifications**

Education and experience

* Degree in Electrical Engineering, Computer Science, Physics or equivalent (Master Degree).
* 5-10 years of experience in digital signal processing.
* Experience in optoelectronic/remote sensing systems will be valued.
* Fluent in English (ALTE-4/C1 or better).

Required Skills

* FPGA and DSP programming knowledge.
* Excellent Python skills.
* Experience with advanced signal processing algorithms.
* Graphics Processing Units (GPUs) and CUDA
* Detection & Estimation Theory and Applications
* Knowledge of 3D Data Visualization and Processing methods.
* Good analytical skills.
* Adaptable to work in a fast-paced work environment.
* Self-motivated, organized and diligent.

Valued Experience

* Familiarity with FMCW RADAR/LiDAR systems.
* Knowledge of ISO quality standards and familiarity with quality management.
* Multiple-Input Multiple-Output (MIMO) and array processing.

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| **Approved by:** |  |
| **Date approved:** |  |
| **Reviewed:** |  |