Chief Scientist (Algorithm Development)

The Chief Scientist for 3-Dimensional Imaging is responsible for leading a development team and for developing real-time 2D and 3D signal and image processing, fusion, calibration, and navigation algorithms within the SNC Enhanced Flight Visions Systems (EFVS) product line.

The algorithms process data from real-time 2D imagery and 3D sensors (radar, LiDAR) and combine this data with terrain data (such as DTED), satellite imagery, and flight hazard data to produce a real-time terrain model that extends to the horizon that is rendered on a pilot display. The model includes both 3D terrain topology/obstacle data and 2D (top-down) terrain imagery data.

Required (Must Have)

- Master’s degree in engineering or physics or related field.
- At least 15 years of experience in the aerospace (or related) industry with proven algorithm development experience.
- Perform algorithm development, modeling, and analysis with Matlab.
- Excellent written and oral communication skills and proficient with Microsoft PowerPoint, Word, and Excel.
- Willing to travel for the purposes of design or marketing presentations, field testing and interaction with customers and subcontractors.

Candidates should have experience with most of the following:

- 3D Radar, LiDAR, and IR camera systems design and performance modeling.
- Processing data from 3-dimensional sensors (such as radar or LiDAR).
- Camera models, registration, and stereo vision based on linear algebra concepts.
- Navigation sensors, coordinate transforms, motion error compensation, and geospatial datums.
- Computational geometry and related spatial concepts (Delaunay triangulation, quad tree and octree structures, surface intersections, ray-tracing, etc.).
- Geospatial databases, modeling and processing, including DTED, HRED, GeoTIFF and CIB data formats.
- High-level knowledge of 3D computer graphics, kinematics, rotation matrices, quaternions. Image processing, adaptive filtering, stochastic processes, and estimation theory.
- Computer programming in the C/C++ language.
- Geomatics and geo referencing and associated mathematics.

Job Type: Full-time

Experience:
- analysis with Matlab: 10 years (Required)
- proven algorithm development experience: 10 years (Required)
- 3D Radar, LiDAR, and IR camera systems design: 10 years (Required)
- Computer programming in the C/C++ language: 10 years (Required)

Education:
- Master’s (Required)

Work authorization:
- United States (Required)

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