SENIOR C++ MATH AND COMPUTATIONAL GEOMETRY SOFTWARE ENGINEER

Posting ID: EM19408448

Company: AGS Laboratories

Position Type: Full-Time

College Major(s): Electrical/Computer Engineering (EE/CpE), Computer Science (CS)

Company Website: https://www.americangemsociety.org

Work Location: Las Vegas, NV

Salary: 80,000/yr

College Level(s): Graduate Student, PhD. Student, Alumni

OVERVIEW

Since our founding in 1996, the AGS Laboratories has achieved many industry firsts and accomplishments by pursuing our mission statement. Among our highlights, we:

• Pioneered the Ideal Cut Grade for the Round Brilliant diamond. (You may also hear it called the AGS Ideal® or the Triple Zero Cut.)
• Created the first scientifically reviewed, objective, and repeatable Cut Grade method in the industry—still the only of its kind.
• Became the first major lab to offer diamond grading reports with a Cut Grade for fancy shapes, including Princess, Emerald, and Oval, as well as patented proprietary cuts.
• Offer diamond grading reports that have a simple, straightforward, and intuitive scale and provide all the information you need to be comfortable in your diamond-buying decision.
• Provide a variety of diamond grading reports, both with and without a diamond Cut Grade, to suit the specific needs of diamond manufacturers, retail jewelers, and of course, you, the consumer.

Roles and Responsibilities

Primary Responsibilities:
• Develop custom internal and commercial software related to laboratory R&D efforts
• Independently develop and enhance 3D geometric modeling algorithms
• Develop mathematical models for various optical and physical phenomena
• Derive equations used to compute deduction in gemstone cut grade system
• Perform statistical analysis when needed

Algorithm and Programming Development Responsibilities:
• Develop algorithms and C-programs for modeling optical properties of gemstones
• Develop algorithms for measuring and generating the 3D geometry of various cuts
• Identify and resolve technical bugs in proprietary software as needed
• Work with programmers from other organizations for integration related projects

Other Duties: The above noted job description is not intended to be an exhaustive list of all duties and responsibilities that may be assigned but rather to give the employee a general sense of the responsibilities and expectations of the job. As the nature of business demands change so, too, may the essential functions of this specific position and/or the skills and abilities required.

Education and Qualifications
Required education:
• BS, MS or PhD degree in mathematics, physics, engineering, computer science and/or a closely related field.

Preferred Skills
Required experience:
• Very strong creative problem solving skills
• Minimum five years of experience in C, C++ and/or C# programming
• High proficiency with 3D graphics and 3D math
• Strong 3D computational geometry
• Algorithm design

Preferred experience:
• MATLAB
• OpenGL and/or DirectX
• Spectroscopy and spectral analysis (FTIR, PL, UV-ViS)
• Experience leading Software development efforts
• Machine learning / AI experience

How to Apply
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