FLSA Status: Exempt
Reports To: Director of Engineering Services
Location: WDS Headquarters, Bozeman, MT

Purpose and Scope of Position
- The Senior Fire Scientist at Wildfire Defense Systems (WDS) is a member of the Engineering Services Division, Fire Science Department that will bring expertise and advanced wildfire/weather modeling skills to optimize WDS Field Operations and support the wildfire consulting division. This position requires a technology-driven individual with a strong scientific background who will significantly impact company success in protecting structures from wildfire ignition and ultimately help WDS protect communities impacted by wildfire around the US.

Organizational Relationship
- This position reports to the Director of Engineering Services
- This position may supervise one employee
- This position will work closely with Field Operations, Data Science, Wildfire Protection Engineering (WPE), and other departments as needed

Duties and Responsibilities
- Fire Behavior Model Development [50%]
  - Develop a fire behavior model that will guide operational decisions throughout the fire season
  - Use artificial intelligence (AI) and other advanced technology to develop a tool that incorporates changing conditions to provide real-time direction to Field Operations personnel
- Operations Optimization [35-45%]
  - Work with Field Operations, WPE and other departments as needed to evaluate the effectiveness of existing strategies to mitigating wildfire risk on properties
  - Work with Field Operations, WPE, and other departments as needed to optimize existing strategies and/or develop new strategies to mitigate wildfire risk on properties
- Fire Science Consultant/Company Expert [5-15%]
  - Work closely with the Data Science team to contribute to the modeling of risk factors for structure mitigation
  - Act as a consultant on various company projects when they require a fire science Subject Matter Expert (SME)
  - Conduct research as needed, collect appropriate WDS data, and publish analyses of wildfire activity as an industry-leading expert
Basic Qualifications (i.e. education, certifications, years of experience, etc.)

- Completion of a Master of Science or Doctoral program or higher in fire science, climatology, meteorology, physics, applied mathematics, statistics, computer science, ecology, or other fire-related field of study
- At least ten (10) years of specialized experience in a fire behavior modeling and weather-related fields
- Knowledge of fire behavior in all types of fuels, how factors such as weather and terrain influence wildfire behavior, and the impacts of forest management activities
- Proven software competency (i.e., MS Office Suite)
- Experience with Python, R, and/or C++ used in the development of fire behavior models
- Experience with the programming, development and practical application of fire behavior or fire spread models
- Experience in the acquisition and use of spatial information, fire damage information, and large data management skills
- Experience with data analysis and statistical analysis methods
- Advanced skill with modern data tools including GIS programs and spatial modeling software/techniques, adept at modeling fire behavior
- Preferred: experience with the use of artificial intelligence/machine learning in the analysis of data and development of predictive analytics
- Preferred: certification as a Certified Wildfire Mitigation Specialist (CWMS)

Knowledge, Skills, Abilities, & Personality Characteristics

- Analytical Skills
  - The ability to observe, evaluate, summarize, and apply meaningful data in the problem-solving process. The level of logical reasoning necessary to connect required actions to desired outcomes. The ability to forecast events based upon current situations. Demonstrated skill in generating alternative solutions to problems.
- Innovation
  - The ability to adapt to fast-changing environments. Willingness to take risks and to consider new approaches to improve the organization’s competitive position.
- Attention to Detail
  - The level at which tasks are performed carefully, accurately, and in accordance with specific instructions. Consistency of work quality and compliance with standards, requirements, and expectations. The tracking of numerical data and detailed organizational information, and the careful application of grammar, spelling, and punctuation rules.
- Decision-Making/Judgment
- The ability to make prudent decisions that are timely, well-researched, and reflect awareness of impact.

- Initiative
  - The ability to perform job responsibilities independently and responsibly. The ability to proactively complete tasks, solve problems, improve processes, enhance products, and/or extend services within assigned range of authority.

- Written Communication
  - Ability to write memos, letters, agendas, e-mails, proposals, and documents that communicate ideas clearly, accurately, and with proper grammar. The level at which written documents support effective operations and reflect the company's professional image.

- Organizational Relations
  - The degree to which the employee collaboratively works with other internal departments, agencies, and/or outside organizations. The level of response to customer requests, both internally and externally. Anticipation and control of obstacles.

This job description should not be construed as an exhaustive statement of duties, responsibilities, or requirements, but a general description of the job. Nothing contained herein restricts WDS rights to assign or reassign duties and responsibilities to this job at any time.

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Employee:

Print: ____________________________  Date: ____________________________

Signature: __________________________

Supervisor:

Print: ____________________________  Date: ____________________________

Signature: __________________________

Department Head or Executive:

Print: ____________________________  Date: ____________________________

Signature: __________________________

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