**Mining Simulation Script User Guide**

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**1. Introduction**

1.1 Purpose  
This user guide provides detailed instructions on how to use and configure the mining simulation script, enabling users to simulate various mining project scenarios and processes.

1.2 Scope  
The simulation script is designed for mining professionals, researchers, and engineers involved in project planning and optimization within the mining industry.

1.3 Audience  
This documentation is intended for users with a basic understanding of mining processes and simulation concepts.

**2. System Requirements**

2.1 Hardware Requirements

Minimum system requirements:

Processor: Any modern processor should suffice.  
 RAM: Minimum 4GB, but more is beneficial for complex applications.  
 Storage: Python,Java,Gitbash itself doesn't consume much space, but consider your project requirements..

Recommended Requirements

Processor: Multi-core processor for better performance.  
 RAM: 8GB or more for handling larger datasets or complex computations.  
 Storage: SSD for faster I/O operations.

2.2 Software Requirements  
 Operating System: Supported OS versions  
 Python Version required: 3.9  
 Additional dependencies:

**3. Installation**

3.1 Downloading the Simulation Script  
1. Visit [Download Page URL].  
2. Select the appropriate version for your operating system.  
3. Follow the on-screen instructions to download the script.

3.2 Installing Dependencies  
1. Install Python 3.9 version.  
2. Open a terminal and navigate to the script directory.  
3. Run `pip install -r requirements.txt` to install the necessary dependencies.

3.3 Configuring the Environment  
1. Open the configuration file (`config.ini`) in a text editor.  
2. Adjust settings as needed, following the guidelines in Section 4.

**4. Configuration**

4.1 Input Parameters  
Specify mining project details, such as ore composition, equipment specifications, and environmental factors.

4.2 Output Preferences  
Configure output settings, including file formats, logging levels, and visualization options.

4.3 Simulation Models  
Choose and fine-tune simulation models based on the specific mining process to be simulated.

**5. Running the Simulation**

5.1 Command Line Interface  
1. Open a terminal in the script directory.  
2. Run `python simulation\_script.py --input input\_file.json --output output\_folder`.

5.2 Batch Processing  
 Utilize batch processing for simulating multiple scenarios simultaneously.

5.3 Monitoring and Logging  
-Monitor progress and review logs for insights into the simulation.

**6. Troubleshooting**

6.1 Common Issues  
 Address common problems encountered during installation and execution.

6.2 Error Messages  
 Interpret error messages and find solutions in the troubleshooting section.

6.3 Contact Support  
 If issues persist, contact our support team at [support@email.com].

**7. Best Practices**

7.1 Data Preparation  
 Ensure accurate and realistic input data for meaningful simulation results.

7.2 Performance Optimization  
 Optimize simulation parameters and hardware configurations for efficient execution.

7.3 Security Considerations  
Follow security best practices to protect sensitive data used in the simulation.

Note: Regularly check for updates on our official website [website\_url] for the latest features, improvements, and bug fixes