

# Microsoft Machine Failure Detection

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Welcome to the Microsoft Machine Failure Detection project! This Streamlit application is designed for predictive maintenance, featuring three key pages for hyperparameter tuning, model selection, and comprehensive visualization. Here's a quick overview of the project:

## View

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### Project Overview

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**Objective:** Predictive maintenance for machine failure detection using various machine learning algorithms.

**Features:**

- Hyperparameter tuning playground with Random Forest, Decision Tree, Logistic Regression, and SVC algorithms.
- Automatic model selection for machine failure prediction.
- Visualization page with comprehensive graphs and data previews.

Contact page with developer information for inquiries.

**Files:**

- `app.py`: Main Streamlit application file.
- Additional files for machine learning algorithms and data visualization.
- `requirements.txt`: List of project dependencies.

### Getting Started

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1. Clone the repository:

```
bash git clone https://github.com/vijaytakbhate2002/Microsoft-Machine-Failure-Detection.git
```

1. Install dependencies:

```
bash pip install -r requirements.txt
```

1. Run the application:

```
bash streamlit run app.py
```

1. Explore the different pages and functionalities for predictive maintenance.

### License

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This project is licensed under the [MIT License](#).