

□ Ovulation Predictor App

The **Ovulation Predictor App** is a desktop application developed to intelligently predict ovulation periods in women. It is designed with simplicity for users and technical depth for medical practitioners, using advanced machine learning algorithms to estimate ovulation based on biological inputs.

📖 About the App

This App was developed to predict ovulation periods in women. It was born out of many reasons, ranging from the unpredictability and complex nature of women's biological and physiological processes. Some adults may estimate their next ovulation period based on experience. However, it becomes a challenge for first-timers who have never experienced it before. This application uses artificial intelligence to reduce uncertainty and eliminate errors caused by manual prediction.

The model embedded in the app performs pattern recognition on biological data to identify the likely ovulation window. This ensures users are informed in advance, giving them time to prepare. It is also equipped with data export and visualization tools to aid decision-making for individuals and health professionals.

✨ Features

- ✓ Predict ovulation based on cycle characteristics
- ✓ Interactive calendar showing fertile window

✓ Export history to CSV, Excel, or PDF

✓ Trend chart to monitor ovulation history over time

✓ Reset inputs and start new prediction

✓ Logo and visual identity for clarity

✓ Works as a standalone Windows application (.exe) – No Python required

🧠 Technologies Used

- Python 3.x

- Scikit-learn (Machine Learning)

- Tkinter (GUI)

- tkcalendar

- Pandas, NumPy

- Matplotlib

- ReportLab

- Pillow (Image handling)

- PyInstaller (for .exe packaging)

🐦 Installation & Usage

For End Users (Doctors or General Users)

1. Download the latest `OvulationApp.exe` file from the [Releases](https://github.com/kunlejelili/OvulationApp/releases).
2. Double-click to run the app. No need to install Python.

For Developers

1. Clone the repository:

```
```bash  

git clone https://github.com/kunlejelili/OvulationApp.git

cd Ovulation

```
```

2. Install required dependencies:

```
```bash  

pip install -r requirements.txt

```
```

3. Run the app:

```
```bash
```

```
python ovulation_app.py
```

```
'''
```

```

```

```
📁 Project Structure
```

```
Ovulation/
```

```
|
```

```
|— ovulation_app.py # Main application script
```

```
|— ovulation_model.pkl # Trained ML model file
```

```
|— synthetic_ovulation_data.csv # (Optional) Dataset used for model training
```

```
|— logo.png # App logo image
```

```
|— OvulationApp.exe # Built Windows executable (upload in Releases)
```

```
|— README.md # Project overview
```

```

```

```
🖼 Screenshots (Optional)
```

```
! [App Screenshot] (https://yourdomain.com/screenshot1.png)
```

```
A sample interface showing prediction and calendar
```

```

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```
🧑🏻 Purpose
```

```
This App helps women and medical professionals:
```

- Anticipate ovulation with precision
- Avoid surprises caused by irregular cycles
- Make reproductive health decisions confidently

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## ## 📢 Feedback

If you have suggestions or want to collaborate, please reach out or create an issue.

For private inquiries (e.g., doctor evaluations), contact the author directly.

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## ## 📄 License

This project is licensed under the MIT License.

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