# AI Assisted Cyber Friend - Cybersecurity Assistant

![Project Banner](https://via.placeholder.com/1200x400/1a73e8/ffffff?text=AI+Assisted+Cyber+Friend+-+Your+AI-Powered+Cybersecurity+Assistant)

AI Assisted Cyber Friend is an intelligent cybersecurity assistant that leverages Google's Gemini AI to help users identify and analyze potential security threats. This project combines advanced AI capabilities with a user-friendly interface to provide real-time threat analysis for files and URLs, along with a cybersecurity-focused chatbot.

## Key Features

### 🛡️ Comprehensive Threat Analysis

- \*\*File Analyzer\*\*: Upload suspicious files (PDF, TXT, LOG, EXE, BAT, ELF, SH) for AI-powered threat detection

- \*\*URL Scanner\*\*: Check URLs for phishing attempts, malware, and security threats

- \*\*AI-Powered Detection\*\*: Utilizes Google's Gemini AI for contextual threat analysis

### 💬 Intelligent Cybersecurity Chatbot

- Get instant cybersecurity advice and best practices

- Ask about security threats and vulnerabilities

- Receive guidance on security improvements

### 📰 Security News Updates

- Stay informed with the latest cybersecurity news and threats

- Curated updates from the digital security landscape

### 🌓 User-Friendly Interface

- Dark/Light mode toggle for comfortable viewing

- Responsive design that works on all devices

- Intuitive navigation and clean layout

## Technologies Used

### Backend

- \*\*Python\*\* with \*\*Flask\*\* framework

- \*\*Google Gemini API\*\* for AI-powered analysis

- \*\*PyPDF2\*\* for PDF text extraction

### Frontend

- \*\*Bootstrap 5\*\* for responsive design

- \*\*Font Awesome\*\* for icons

- \*\*Custom CSS\*\* with CSS variables for theme management

### Development Tools

- \*\*Git\*\* for version control

- \*\*Dotenv\*\* for environment variable management

- \*\*Virtual environments\*\* for dependency management

## Getting Started

### Prerequisites

- Python 3.7+

- Google Gemini API key

- Basic understanding of Python and Flask

### Installation

1. Clone the repository:

```bash

git clone https://github.com/yourusername/ai-assisted-cyber-friend.git

cd ai-assisted-cyber-friend

```

2. Create and activate a virtual environment:

```bash

python -m venv venv

source venv/bin/activate # Linux/MacOS

venv\Scripts\activate # Windows

```

3. Install dependencies:

```bash

pip install -r requirements.txt

```

4. Create a `.env` file with your API key:

```env

GEMINI\_API\_KEY=your\_google\_gemini\_api\_key\_here

```

5. Run the application:

```bash

python app.py

```

6. Access the application at `http://localhost:5000`

## Usage

### File Analysis

1. Navigate to the File Analyzer section

2. Upload a suspicious file (PDF, TXT, LOG, EXE, BAT, ELF, SH)

3. Receive AI-powered threat analysis

### URL Scanning

1. Navigate to the URL Analyzer section

2. Enter the URL you want to scan

3. Get instant security assessment

### Cybersecurity Chat

1. Use the chat interface to ask cybersecurity questions

2. Get expert advice on threats, vulnerabilities, and best practices

## Project Structure

```

ai-assisted-cyber-friend/

├── genai-main.py # Main Flask application

├── requirements.txt # Python dependencies

├── templates/

│ └── ui.html # Main application interface

├── static/ # Static assets (CSS, JS, images)

├── .env.example # Environment variable template

└── README.md # Project documentation

## Contributing

We welcome contributions to enhance AI Assisted Cyber Friend! Here's how you can help:

1. \*\*Fork\*\* the repository

2. \*\*Clone\*\* your forked repository

3. Create a new \*\*branch\*\* for your feature:

```bash

git checkout -b feature/your-feature-name

```

4. \*\*Commit\*\* your changes with descriptive messages

5. \*\*Push\*\* your changes to your fork

6. Submit a \*\*Pull Request\*\* with a clear description of your changes

Please ensure your code follows PEP 8 style guidelines and includes appropriate tests.

## Future Roadmap

- [ ] Implement user authentication system

- [ ] Add historical analysis reports

- [ ] Integrate VirusTotal API for additional threat intelligence

- [ ] Develop browser extension for real-time protection

- [ ] Add multi-language support

- [ ] Implement scheduled security scans

## License

This project is licensed under the MIT License - see the [LICENSE](LICENSE) file for details.

## Contact

For questions, suggestions, or collaboration opportunities:

- \*\*Project Maintainer\*\*: Your Name

- \*\*Email\*\*: your.email@example.com

- \*\*GitHub\*\*: [@yourusername](https://github.com/yourusername)

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