



# DigiSuraksha Cybersecurity Internship 2025

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Intern Name: Dhairya Kumar Patel

Intern ID: 445

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## Homoglyph Maker Tool

A simple Python tool to replace characters in text with visually similar Unicode characters (homoglyphs). This can be useful for creating text variations that look similar but have different Unicode representations.

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### Features:

- Transform text by replacing characters with Unicode homoglyphs
- Support for Latin letters, numbers, and special characters
- Configurable replacement probability
- Multiple selection modes (random or first available)
- Case preservation option
- Character information display
- Command-line interface



### Installation:

No additional dependencies required - uses only Python standard library.

```
git clone https://github.com/DhairyaKumarPatel/Homoglyph-Maker-Tool.git  
cd Homoglyph-Maker-Tool
```

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## Usage:

### Basic Usage

Transform text with random homoglyphs:

```
python homoglyph_maker.py "hello world"
```

### Advanced Options

Transform with 50% probability:

```
python homoglyph_maker.py "hello world" --probability 0.5
```

Use first available homoglyph instead of random:

```
python homoglyph_maker.py "hello world" --mode first
```

Don't preserve original case:

```
python homoglyph_maker.py "Hello World" --no-case
```

### Information Commands

Show homoglyphs for a specific character:

```
python homoglyph_maker.py --info a
```

List all available character mappings:

```
python homoglyph_maker.py --list-all
```

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## Examples:

```
# Basic transformation
$ python homoglyph_maker.py "hello"
Original: hello
Transformed: hello

# Partial transformation (50% chance)
$ python homoglyph_maker.py "hello world" --probability 0.5
Original: hello world
Transformed: hello world

# Character information
$ python homoglyph_maker.py --info o
Character: 'o' (U+006F)
Available homoglyphs:
1. 'o' (U+043E)
2. 'o' (U+03BF)
3. 'σ' (U+03C3)
4. 'o' (U+03BF)
5. 'օ' (U+FF4F)
```

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## Supported Characters:

The tool supports homoglyphs for:

- Latin letters (a-z)
- Numbers (0-9)
- Common punctuation marks (., :; !?/-)

Each character has multiple homoglyph variants from different Unicode ranges:

- Cyrillic characters
- Greek characters
- Fullwidth characters
- Other similar Unicode symbols



## Use Cases:

- Text obfuscation for research purposes
- Creating visually similar text variants
- Unicode and character encoding demonstrations
- Testing font rendering and character recognition systems