



الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري

Arab Academy for Science, Technology & Maritime Transport

Fake Profile Generator

Course: Introduction to Cybersecurity (CCY2001)

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Introduction

This Python project, titled Fake Profile Generator, generates synthetic user data such as names, emails, addresses, and more using the Faker library. It provides a clean and interactive GUI built with Tkinter, designed for use in testing, education, and learning environments.

Objectives

- Use third-party libraries (Faker, pyperclip) to generate and manage data.
- Create a clean, user-friendly GUI using Tkinter.
- Export data in both JSON and CSV formats.
- Implement extra features like dark mode, search, clipboard copy, and data statistics.


Tools & Technologies

- Python 3.13 – Core programming language
- Faker – Generates realistic fake data
- Tkinter – GUI framework
- JSON & CSV – Data export formats
- pyperclip – Clipboard support
- Visual Studio Code – Development environment

Key Features

- Generate multiple fake profiles with selected fields
- Export profiles to CSV or JSON files
- Live editable preview area
- Toggleable Dark Mode for better accessibility
- Copy output to clipboard with one click
- Search for keywords in the preview text
- Display profile statistics (total count, male/female distribution)

How It Works

1. Launch the application.
2. Enter how many fake profiles you want to generate.
3. Select the fields (name, address, job, etc.).
4. Choose the output format (CSV or JSON).
5. Click ' Generate & Save' to preview and export.
6. Use extra tools like search, copy, and dark mode as needed.

Project Code Structure

- `generate_fake_profile()` – Creates a profile using Faker with only selected fields.
- `CustomJSONEncoder` – Ensures compatibility for Decimal and date when saving JSON.
- `save_profiles_as_json()` / `save_profiles_as_csv()` – Export functionality.
- `toggle_dark_mode()` – Switches GUI theme.
- `search_profiles()` – Highlights search terms in the preview.
- `update_statistics()` – Counts total, male, and female profiles.
- `copy_to_clipboard()` – Copies preview content to the clipboard.
- Tkinter GUI – Full interface to control generation, search, preview, copy, dark mode, and stats.

Example Output (JSON)

```
{  
  "name": "John Doe",  
  "username": "johndoe95",  
  "sex": "M",  
  "address": "123 Elm Street, NY",  
  "mail": "johndoe@example.com",  
  "birthdate": "1995-08-12",  
  "job": "Software Developer",  
  "company": "TechCorp"  
}
```

Conclusion

This Fake Profile Generator demonstrates real-world applications of Python in GUI design, data generation, and file handling. With enhanced usability features like dark mode, live search, and clipboard support, it is a useful tool for developers, testers, and students alike.