

Date: 09/21/2025

Term: 2025 Fall

Course: Advance Artificial Intelligence (MSCS-633-M50)

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Assisgment 2: Biox Systems — AI QR Code Generator (Python)

A tiny, reliable CLI app that turns any URL into a **brandable, layout-ready QR poster** (title, subtitle, QR with optional center logo, footer). Uses high error-correction, so a small logo won't break scans.

History: The QR Code (Quick Response code) was invented in **1994** by **Denso Wave** (Japan), as a fast, two-dimensional, machine-readable way to encode information.

Repository & Source

- **Repo:** <https://github.com/baralsamrat/MSCS-633M50-Assignment-2>
- **Main script:** `main.py`
- **Mac one-shot runner (optional):** `run.sh`

Requirments

- `python3 -m venv .venv`
- `source .venv/bin/activate`
- `pip install qrcode pillow`
- Run `src/run.sh` on MacOS or Linux System
- `deactivate venv`

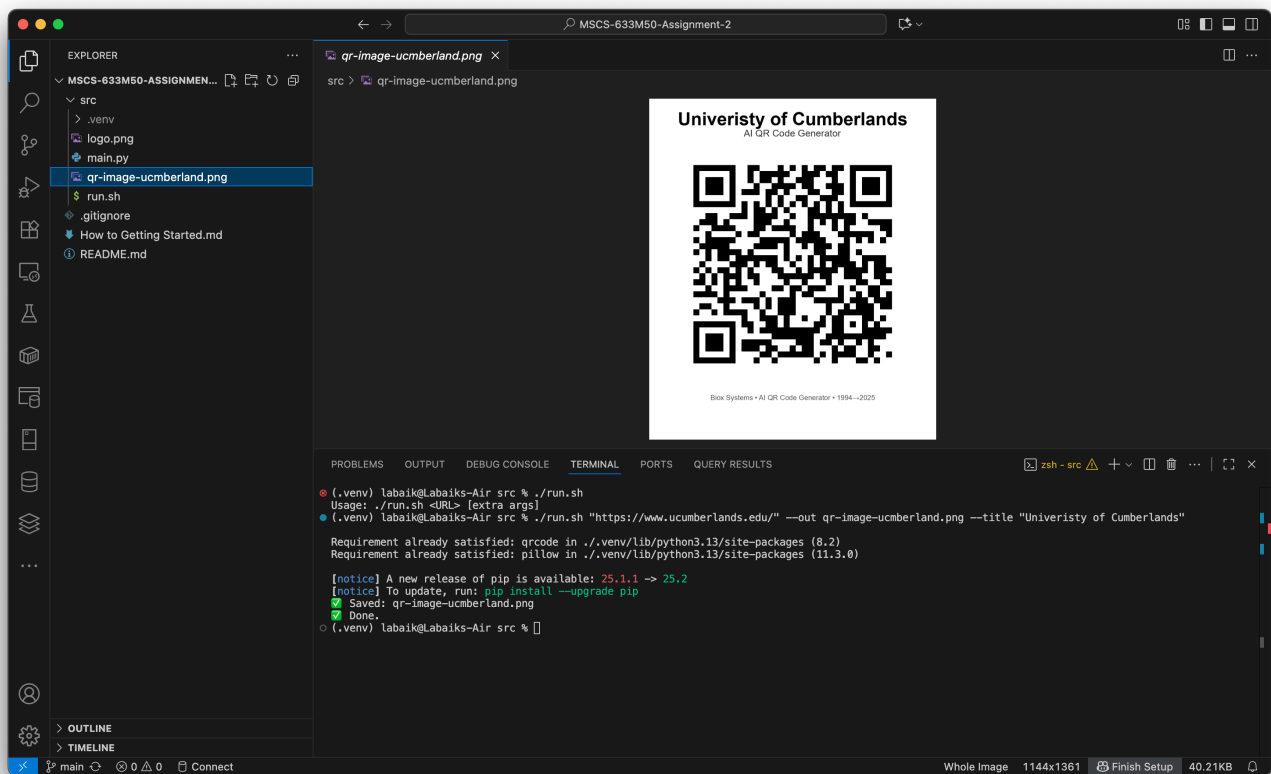
Example

```
python main.py "https://www.ucumberlands.edu/" \  
  --out main_sample.png \  
  --title "Univeristy of Cumberlands" \  
  --subtitle "QR Code" \  
  --footer "Biox Systems • AI QR Code Generator • 1994→Sep 21 2025" \  
  --size 900 --border 4 --pad 80
```

OR

```
chmod +x run.sh
```

```
./run.sh "https://www.ucumberlands.edu/" --out qr-image-ucmberland.png --  
title "Univeristy of Cumberlands"
```



OUTPUT:

```
Saved: qr-image-ucmberland.png  
✓ Done.
```

Univeristy of Cumberlands

AI QR Code Generator



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✨ Features

- **Crisp QR** (no blurry resize): computes exact pixel size for the QR grid
- **High error correction (H)**: safe for a small **center logo** overlay
- **Clean layout**: Title, Subtitle, QR, Footer — all **optional**
- **Accessible colors**: accepts hex or named colors, validated safely
- **Single file**: easy to drop into any project, works on macOS/Windows/Linux

HOW TO GETTING STARTED
