

- ▶ Southern Skin Cancer Treatment Centers of America
- ▶ Capstone I Project – Melissa Ecker
- ▶ December 1, 2025

UV INDEX CHART TOOL FOR PATIENTS



CLINICS SPECIALIZING
IN SKIN CANCER
TREATMENT AND
PREVENTION



FOCUS ON PATIENT
EDUCATION &
MONITORING



WEBSITE AND PATIENT
PORTAL
UNDERGOING
REDESIGN



GOAL: IMPROVE UV
DATA ACCESS FOR
PATIENTS

ORGANIZATION BACKGROUND

THE PROBLEM

No integrated UV tool

Patients search for data manually

Inconsistency affects treatment

Increased burden on patients & staff



Manual data entry



External sources



Patient responsibility



No integrated technology

CURRENT STATE OF UV TRACKING IN PATIENT PORTAL

DESIRED OUTCOME



Automated
UV retrieval



Location-
based input



10-day chart
view



Responsive UI;
no PHI stored

OPTIONS CONSIDERED

Buy

Buy commercial
widget

Improve

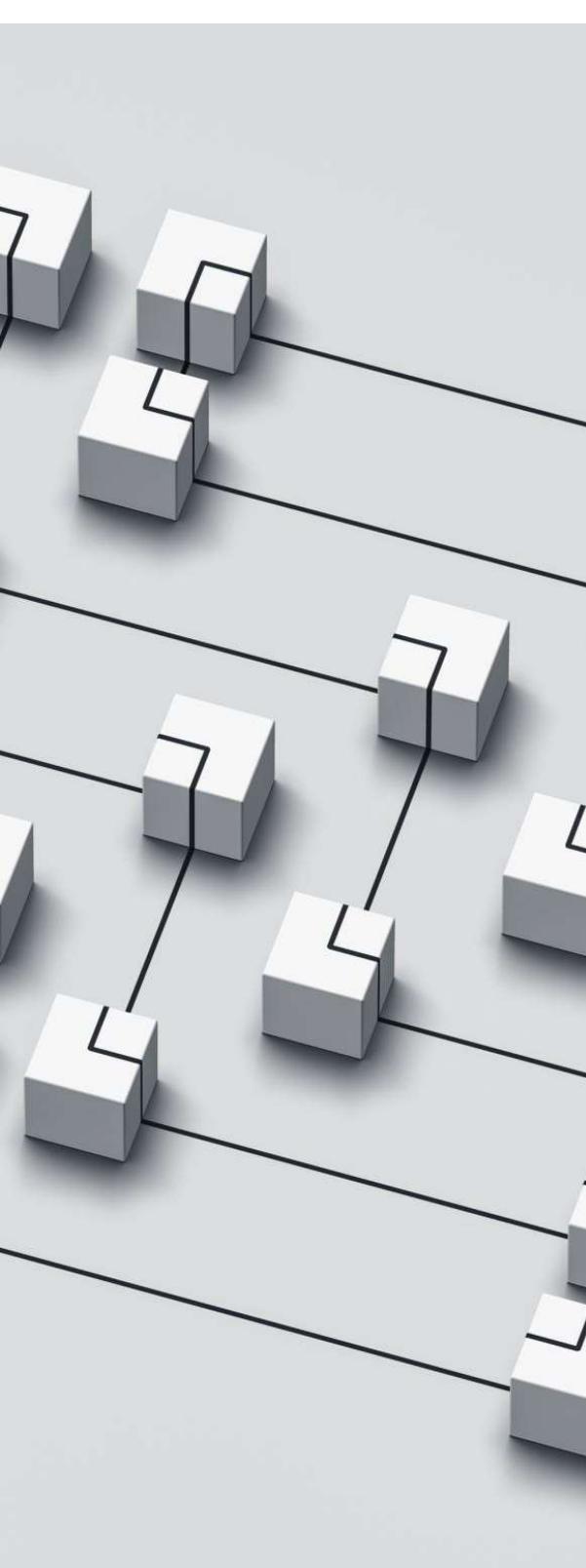
Improve manual
entry

Build

Build custom tool
(chosen)

PROJECT PLAN & SCHEDULE

Phased execution
All milestones completed
on time
110 labor hours (met)



SYSTEM DESIGN OVERVIEW

- ▶ Client-side architecture
- ▶ Runs in-browser
- ▶ Uses existing web server
- ▶ HTML5/CSS/JS solution

APPLICATION COMPONENTS

- ▶ City/ZIP input
- ▶ openmeteo.com API
- ▶ Chart.js visual chart
- ▶ Clear & Find buttons

TESTING & VALIDATION



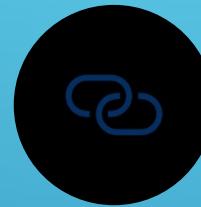
UNIT TESTING



INTEGRATION
TESTING



SYSTEM
TESTING



BROWSER
COMPATIBILITY



ALL TESTS
PASSED

IMPLEMENTATION

- ▶ Deployed 11/25/2025
- ▶ Integrated into patient portal
- ▶ Verified API connectivity

ETHICS, LEGALITY & SECURITY



ACM Code of
Ethics



No PHI collected
or stored



HTTPS API calls



Compliant
open-source use

SUPPORT & INTEGRATION



IT training



Patient tutorial added



API monitoring



Future enhancements planned

LESSONS LEARNED

- ▶ On time & within budget
- ▶ Simple, effective design
- ▶ External API dependency risk
- ▶ Site compatibility effort

CONCLUSION

- ▶ A secure, compliant, patient-centered tool that improves UV tracking and supports better health outcomes.

