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

UV INDEX CHART TOOL FOR PATIENTS

ORGANIZATION BACKGROUND

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

THE PROBLEM

- No integrated UV tool
- Patients search for data manually
- Inconsistency affects treatment
- Increased burden on patients & staff

CURRENT STATE OF UV TRACKING IN PATIENT PORTAL

- Manual data entry
- External sources
- Patient responsibility
- No integrated technology

DESIRED OUTCOME

Automated UV retrieval

Location-based input

10-day chart view

Responsive UI; no PHI stored

OPTIONS CONSIDERED

Buy	Improve	Build
Buy commercial widget	Improve manual entry	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.