

1) Group information

- a) **Team name:** Astroboiz
- b) **Group members:**
 - i) Greg Saul
 - ii) Tyler Laceby
 - iii) Nolan Berg
- c) **Brand:**
 - i) Astropath
 - ii) Simplifying astrophotography

2) Project summary:

- a) **Summary:**
 - i) Astropath aims to streamline the workflows of astrophotography enthusiasts by eliminating the need for multiple third-party applications such as Adobe Lightroom, StarStaX, FFMPEG, and Starry Landscape Tracker*.
- b) **Problem solved:**
 - i) While Astropath is not designed to replace Photoshop or Lightroom for all photo editing tasks, it fills a critical niche in astrophotography that is often overlooked in the current market.
- c) **Tools used:**
 - i) Frontend: Svelte & Typescript
 - ii) Backend: Go & Wails

3) Plan

- a) **StarTrails:** Automatically generates star trail images by stacking multiple exposures, blending the brightest points to create trail effects.
- b) **Timelapse:** Creates time-lapse videos of the night sky by combining a series of sequential images, showing the movement of stars and celestial bodies over time.
- c) **Starlapse:** Merges star trails and time-lapse creation, allowing users to produce dynamic time-lapse videos that highlight the formation of star trails.
- d) **Denoise Stacking:** Reduces noise by stacking multiple exposures, and reducing the random noise which is generated by high ISO sensors. This technique can be incredibly complex and involves considering the rotation of the earth, isolating stationary objects, and stacking the stars before averaging the pixels into a single image.
- e) **Other helpful workflow techniques** which improve the workflow and experience for astrophotography enthusiasts.