SoGnar — Mini-Game Team

CS Field Session Proposal (CSCI 370)

Colorado School of Mines — Summer 2026

Making Gnarly iOS Games

Company Background

SoGnar is a Golden-based cycling technology startup building a gamified mobile application that transforms everyday bike rides into interactive adventures. The app uses GPS tracking to deliver rewards on real-world cycling rides, rewarding riders with in-app currency for miles ridden, trails explored, and challenges completed. Those rewards can then be used within our mini-game platform.

SoGnar originated as a CS Field Session project at the Colorado School of Mines in Fall 2025, and two students from that original team have continued development through an independent study this spring. The platform is built natively for iOS using Xcode, with MapKit integration for real-time route tracking and a GoDot game engine for the in-app cycling game. SoGnar holds a provisional patent covering its core gamification and GPS-based reward mechanics.

SoGnar is transitioning to a freemium business model. The current game and platform will serve as the foundation for the free tier, while premium subscribers will gain access to additional games, enhanced reward boosts, and exclusive content. The long-term vision is to offer four to five distinct game experiences as part of the premium subscription, making SoGnar a gamified cycling experience.

Description of the Work to Be Done

This team will iterate on SoGnar's 4 mini games and will collaborate to create 1 brand new game with creative freedom. Rather than focusing on a single game, this team will operate as SoGnar's "Mini-Game Development Team," responsible for expanding the platform's game library and helping refine the current offerings.

The goal is to balance quality and quantity, ensuring each game is polished, engaging, and meaningfully integrated into the SoGnar ecosystem.

Mini-Game Development Vision

Each mini-game is/does:

- Cycling-inspired in gameplay, mechanics, or theme
- Aligned with SoGnar's branding
- (Will need to be integrated) with SoGnar's coin/reward system
- Designed for short, repeatable play sessions (arcade-style)
- Offer progression, challenge, and replayability
- Align with SoGnar's high-energy, slightly rebellious brand tone
- An avatar that can be switched out in the Avatar Hub. Avatar Development and refinement is required as part of this project.

The new mini-game developed by the team will have creative freedom, but will need to follow these parameters.

Students will also work in our "Gnarlings Zone", a kid-based arcade separate from the main gameplay. These games are built with an educational purpose and apply Montisorri Educational Principles to gameplay. Students will be expected to work in these games, but the main focus will be on the games within the main platform.

Technical Requirements

- **Platform:** iOS, built with GoDot (to maintain consistency with the existing SoGnar game engine) or SceneKit if 3D is pursued.
- **Integration:** The game must integrate with SoGnar's existing coin/reward system and user authentication so that earned rewards sync with the main app.
- **Performance:** Smooth, consistent frame rate on iPhone
- **MacBook**: A Mac is required for this project. A processing chip of M4 is desired.

Development Process & Toolchain

SoGnar operates within an Agile development framework. During the five-week summer session, the team will work in weekly sprints aligned with the CSCI 370 course structure. Each sprint will include planning, development, and a review/demo with the SoGnar.

The client will be available throughout the entire five weeks and is prepared to meet as frequently as the team needs — whether that's daily standups, mid-sprint check-ins, or ad-hoc sessions to unblock issues. The goal is to keep communication open and iteration fast.

The team will use the following toolchain:

- **GitHub:** Version control, issue tracking, pull requests, and code review. Students will work within SoGnar's established repository and branching workflow.
- **Slack:** Primary communication channel for day-to-day coordination, async updates, sprint planning discussions, and direct access to the client.
- **Claude (AI-Assisted Development):** SoGnar integrates Claude into its development workflow. Students will use Claude as an AI pair-programming tool for code generation, debugging, documentation, and rapid prototyping. This gives students hands-on experience with AI-assisted software development.
- **GoDot:** Our Mini-Games are built in GoDot. Students will be required to work in Godot

Desired Skill Set

Students are expected to learn new technologies as part of the course. The following skills will be helpful but are not prerequisites:

- **Prompt Engineering:** Completion of Antropic Academy courses prior to field session start (free)
- **GoDot:** Game development framework for 2D or 3D rendering on iOS. Prior game development experience in Godot.
- **Game Design Fundamentals:** Understanding of game loops, collision detection, procedural generation, difficulty scaling, and player feedback systems.
- **Graphic Design / Digital Art:** Ability to create or adapt Retrowave-themed sprites, backgrounds, and UI elements. Familiarity with tools like Figma, Aseprite, or Photoshop is a bonus.
- **Xcode & iOS Development:** All development is done in Xcode. Access to a Mac is required.
- **GitHub / Version Control:** Standard collaborative development practices.

Preferred Team Size

3–5 students. Building a complete game from scratch requires effort across design, development, art, and integration. A team of four or five allows specialization — for example, one or two students focused on gameplay programming, one on art and visual design, and one on integration with the SoGnar platform and premium subscription system.

Internship Potential

There is potential to offer outstanding student(s) a continued role with SoGnar following the field session, either as an intern or ongoing independent contributor, depending on performance, interest, and the state of the project.

Location

All work may be performed remotely on the Mines campus or in the ORC conference room. The client is based on campus and is available for in-person meetings if desired, but remote collaboration via video calls and Slack is the expected norm. No mileage reimbursement is required. The ORC Conference room will be open to all SoGnar teams and individuals for meetings and collaboration. Students are encouraged to work at the ORC. Swag, drinks, and snacks will be provided at the ORC for SoGnar teams. **Note**: an in-person Project Kickoff at the Outdoor Recreation Center will be required unless otherwise discussed. This meeting may last up to 4 hours.

Intellectual Property & NDA

Students will be asked to assign intellectual property rights for work produced during the field session to SoGnar Technologies LLC. These terms will be discussed and agreed upon before the project begins.

Why This Project Is Exciting

This is a greenfield game development project with creative freedom and real-world impact. Students will design and build a complete game from concept to playable product, with a distinctive Retrowave visual identity that makes for a standout portfolio piece. The games will ship as part of SoGnar's premium offering, meaning students will see their work in the hands of real users. The Agile workflow with GitHub, Slack, and AI-assisted development mirrors how modern software teams operate, giving students directly transferable professional skills. For students interested in game development, mobile apps, or startup culture, this is an opportunity to do meaningful, creative technical work that goes well beyond a classroom exercise.

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Location: Mines Outdoor Recreation Center and Remote

Find out more at www.getsognar.com