

Tech[HACK] Valley

Hosted by Georgia Tech Esports

Software Track: Esports & Gaming Innovation

The Challenge

The esports and gaming industry has grown into a global phenomenon with over 500 million viewers worldwide and a market projected to reach \$9.29 billion by 2032. Yet beneath the surface of this explosive growth lie persistent challenges affecting gamers, content creators, tournament organizers, professional teams, and audiences alike. The Software Track invites you to build solutions that address real problems in this dynamic space.

This track is **intentionally broad**. Whether you're passionate about competitive gaming, casual play, content creation, community building, or the business of esports, there's a problem worth solving. Your submission should demonstrate **genuine innovation** that addresses a meaningful challenge faced by any stakeholder in the gaming ecosystem.

Who Are You Building For?

Your solution should serve one or more of these stakeholder groups:

Gamers

From casual players to aspiring professionals, gamers face challenges including skill development, finding teammates, managing time, dealing with toxicity, tracking performance, and balancing gaming with life responsibilities. Solutions might help players improve, connect, or simply enjoy their hobby more fully.

Esports Audience & Fans

Viewers want deeper engagement with the competitions and players they love. The industry struggles with fan retention between events, fragmented viewing experiences across platforms, and converting casual viewers into dedicated fans. Solutions might enhance how audiences discover, watch, or interact with esports content.

Tournament Organizers

Running tournaments involves complex logistics: bracket management, scheduling across time zones, player verification, anti-cheat enforcement, prize distribution, and production quality. Solutions might streamline operations for events ranging from local LAN parties to international championships.

Esports Organizations & Teams

Professional teams struggle with profitability, player development, roster management, fan monetization, and creating sustainable business models beyond sponsorships. Solutions might address team operations, player analytics, content creation, or revenue diversification.

Content Creators & Streamers

Streamers and content creators face challenges with audience growth, community management, monetization, content discovery, managing chat toxicity, and maintaining mental health under public scrutiny. Solutions might help creators build, engage, or sustain their communities.

Problem Areas to Explore

Below are categories of persistent challenges in the esports and gaming space. These are suggestions, not requirements. Feel free to identify problems not listed here.

| Problem Area | Example Challenges |
|---------------------------------|---|
| Community & Toxicity | 86% of gamers report experiencing harassment. Solutions for moderation, positive community building, reporting systems, or creating safer spaces. |
| Fan Engagement | Events drive spikes but fandom doesn't persist. Always-on engagement, season-long narratives, connecting fans to teams/players year-round. |
| Tournament Operations | Bracket management, scheduling conflicts, match verification, anti-cheat, prize pool distribution, cross-platform compatibility. |
| Player Development | Skill tracking, coaching tools, VOD review, performance analytics, pathways from amateur to professional, team finding/formation. |
| Monetization | Esports generates only ~\$2 per viewer vs \$51 for NFL. Direct fan monetization, sustainable revenue beyond sponsorships, creator economics. |
| Content & Streaming | Discoverability, clip creation, highlight generation, co-streaming tools, chat management, audience analytics, cross-platform presence. |
| Health & Wellness | Gaming/life balance, physical health (posture, RSI), mental health for players and creators, burnout prevention, healthy habits. |

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|---------------------------------|--|
| Grassroots & Amateur | Clear pathways from casual to competitive, local event organization, scholastic esports support, community tournament tools. |
| Data & Analytics | Player statistics, match analysis, team performance metrics, viewership analytics, predictive modeling, scouting tools. |

Rules & Requirements

Team Composition

- Teams may consist of 1-4 members
- Diverse skill sets encouraged (developers, designers, business minds, domain experts)
- All team members must be registered hackathon participants

Submission Requirements

- A working software prototype, MVP, or comprehensive proof-of-concept
- Source code repository (GitHub, GitLab, etc.)
- Documentation explaining the problem addressed, target users, and solution approach
- A brief presentation (5 minutes maximum) demonstrating your solution
- Any third-party APIs, libraries, or assets must be properly credited

Technical Guidelines

- **Platform:** Web applications, mobile apps, desktop software, browser extensions, Discord bots, or any relevant platform
- **Stack:** Any programming language, framework, or technology stack is acceptable
- **APIs:** Integration with gaming APIs (Riot, Steam, Twitch, Discord, etc.) is encouraged but not required
- **AI/ML:** Use of artificial intelligence or machine learning is welcome where appropriate

Judging Criteria

Projects will be evaluated by a committee based on:

| Criterion | Description |
|-----------------------------|--|
| Innovation | Originality of the solution and creative approach to the problem |
| Problem-Solution Fit | Clear identification of a real problem and how the solution addresses it |
| Technical Execution | Code quality, technical complexity, and functional completeness |
| User Experience | Design quality, usability, and appeal to target users |
| Impact Potential | Scalability, market potential, and ability to create meaningful change |

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|---------------------|---|
| Presentation | Clarity of demonstration and ability to articulate the vision |
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Awards

The overall winner of the Software Track will receive an award to be determined. All participants will receive recognition for their contributions to advancing the esports and gaming ecosystem.

Industry Context

Understanding the current state of esports and gaming will help you identify meaningful problems and design impactful solutions.

The State of Esports

The esports industry finds itself at a pivotal moment. After explosive growth followed by a challenging "esports winter" in 2023-2024, the industry is now stabilizing and professionalizing. Major organizations are focusing on sustainable business models rather than growth at all costs. The gap between industry leaders and smaller organizations continues to widen, leading to consolidation and mergers. Meanwhile, grassroots esports is gaining renewed attention as the foundation for developing talent and engaged communities.

Key Industry Trends

- **Always-On Engagement:** The industry is shifting from event-driven spikes to continuous fan engagement through season-long narratives, recurring formats, and constant content.
- **Community Casting & Co-Streaming:** Popular streamers hosting official broadcasts are diversifying audiences but raising questions about who "owns" the viewership.
- **Creator-Owned Organizations:** Streamers and content creators are launching their own esports teams, blending entertainment and competition.
- **Mobile Esports Growth:** Titles like PUBG Mobile and Mobile Legends are driving esports growth in mobile-first regions.
- **AI Integration:** AI-powered coaching, analytics, and broadcast enhancement tools are transforming how teams train and how events are produced.
- **Grassroots Investment:** Industry leaders recognize that Tier 2/3 ecosystems and amateur pathways are essential for long-term health.

The Toxicity Challenge

Gaming communities face persistent issues with toxic behavior. Research shows that 86% of adult gamers and 66% of young people experienced harassment in online multiplayer games in 2022. Women report particularly high rates of gender-specific discrimination (77%). Toxic behavior damages player retention, brand reputation, and the overall gaming experience. While reporting systems exist, only 19% of gamers believe harassment has no impact on how they play. The industry needs better solutions for moderation, community standards, and creating welcoming environments.

The Monetization Gap

Despite massive audiences, esports struggles to monetize effectively. While traditional sports like the NFL generate approximately \$51 per viewer, esports generates only

about \$2. The industry remains heavily dependent on sponsorships and advertising, creating financial vulnerability. Finding direct fan monetization models that feel "natural, rewarding, and equitable" remains a critical challenge for teams and organizers seeking sustainable business models.

Existing Solutions

Current tournament and esports management platforms include:

- **Battlefy, Toornament, FACEIT:** Tournament bracket and competition management
- **Discord:** Community communication and organization
- **Twitch, YouTube Gaming:** Live streaming and content distribution
- **Stats tracking sites:** OP.GG, Tracker.gg, and game-specific analytics
- **Team management:** Various CRM and operations tools adapted for esports

However, gaps remain. Many existing solutions are incomplete, forcing users to switch between multiple platforms. Integration between tools is limited. And many problem areas, particularly around community health, fan engagement persistence, and creator sustainability, remain underserved.

Resources

- Esports Charts (escharts.com): Viewership analytics and industry data
- Newzoo (newzoo.com): Gaming and esports market research
- Esports Insider (esportsinsider.com): Industry news and analysis
- Fair Play Alliance (fairplayalliance.org): Resources on healthy gaming communities
- Take This (takethis.org): Mental health resources for gaming
- ADL (adl.org): Research on harassment in online gaming

Build something that matters. Solve a real problem. Shape the future of esports and gaming!