

Queens Gambit Chess Institute

Executive Summary

Community Partner

Ashley Lynn Priore

Student Consulting Team

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Background

Queens Gambit is a Pittsburgh-based nonprofit founded in 2014 by Ashley Lynn Priore with a mission to empower underserved communities, particularly women, girls, and students of color, through chess. Serving over 2,000 students annually across grades 2–12, the organization partners with more than 75 schools and community centers to deliver enrichment programs that build leadership, critical thinking, and life skills. The organization operates on the following mission:

“We elevate a new generation of strategic, inclusive, and civically-minded leaders through the power chess.”

Project Description

Project Opportunity

Queens Gambit provides chess education and organizes tournaments for students through its partner programs, many of whom come from low-income backgrounds. A major challenge has been the lack of a cost-effective and accurate system to track student progress and ratings. The only existing standard, USCF rankings, requires a paid membership and frequent tournament participation, making it inaccessible and often unrepresentative of students’ true skill levels. Without an internal tracking system, Queens Gambit risks losing valuable opportunities to boost student engagement, measure progress, and grow its educational impact. This project aimed to address that gap by developing a sustainable, branded rating and leaderboard platform tailored to their needs.

Project Vision

Our vision was to equip Queens Gambit with a sustainable, accessible, and easy-to-use rating and leaderboard system that removes the financial and logistical barriers of relying on USCF affiliation. By customizing an open-source tournament platform to reflect Queens Gambit’s branding and workflows, we aimed to deliver a tool that instructors could seamlessly integrate into their regular classes and events. This system makes it easier to record and view student match results, which in turn motivates instructors to host matches more frequently, ultimately supporting greater student engagement and skill development across sites.

Project Outcomes

The project resulted in a fully deployed, branded leaderboard platform tailored to Queens Gambit's needs, along with accompanying support materials for instructors. We built organizational capacity by training our community partner to lead user testing and onboarding. A public-facing leaderboard site was also created to showcase student rankings across partner sites, promoting visibility, motivation, and friendly competition.

Project Deliverables

- Customized Ladder and Tournament Manager: A tailored version of the open-source Coronate platform, rebranded and configured for Queens Gambit's instructional use. The site is at <https://rook-cmu.is.net>, providing instructors with a tool to manage chess matches and maintain internal ratings.
- Instructor Support Materials: A written user guide and a playlist of short, task-based instructional videos to support instructors as they integrate the platform into their day-to-day classes.
- Cross-Site Leaderboards: Student-facing leaderboards, both partner-site-specific and organization-wide, generated from match data and deployed on Render at <https://queens-gambit-leaderboards.onrender.com/>. These leaderboards showcase student progress and foster healthy competition across partner sites.

Recommendations

To maximize the impact of the new leaderboard system, we recommend prioritizing instructor adoption by ensuring all instructors are familiar with the platform and confident using it. Integrating it gradually into class routines can help shift away from informal, paper-based tracking. For the student-facing leaderboard, we suggest promoting visibility by regularly highlighting top performers, such as announcing the top-ranked students during class sessions, to encourage engagement, foster healthy competition, and support long-term program growth. Looking ahead, future enhancements could include saving match data through a more instructor-friendly method than GitHub Gists to improve usability and streamline recordkeeping.

Student Consulting Team

Baron Niu was the subject matter expert (SME), being a Candidate Master in chess. He is a junior majoring in Information Systems, minoring in Computer Science and Business Analytics, with career interests in data analytics, machine learning, and software development.

Jorge Urias served as the technical lead. He is a junior majoring in Information Systems, minoring in Entrepreneurship, with career interests lying at the intersection of artificial intelligence and entrepreneurship.

Vy Tran served as project manager, and is a senior majoring in Information Systems. She will be interning at PwC this summer, returning to CMU to complete her MS in AI Engineering – Information Security in the fall, and is looking toward a career in cybersecurity consulting.