Slippi Stats Project Pitch

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Pitch Slideshow: (We made this in case we needed to give a more formal 5-minute pitch)

Project Goals:

- Build a standalone desktop app for computing and displaying statistics from .slp files
    - Desktop App (or integrate all features into fork of the Slippi-Launcher)
        - Electron & React using JS/TS
    - Create and program **cumulative statistics**
        - Compiles many single-game stats into useful cumulative statistics
        - Use a sqlite database to store game stats
    - Create and program **advanced single game statistics**
    - Merge statistics features into Slippi-Launcher

Resources:

- Slippi-JS (https://github.com/project-slippi/slippi-js)
    - Javascript codebase for parsing and computing basic statistics from single game
    - Current items parsed from .slp files:
        - Book-keeping info, characters & stage selected, player names etc.
        - Move count
        - Fighting state vs. neutral state
        - Combo % (semi-advanced)
        - Wavedashes, wavelands (semi-advanced stat)
- Slippi Launcher (https://github.com/project-slippi/slippi-launcher)
    - Electron & React Frontend for launching the game
        - Connects players for multiplayer,
        - Communicates with the Dolphin emulator
        - Displays basic single game stats
        - Replays games from .slp files

Jobs:

- Frontend - Designing layout of application and logical flow
    - Create graphs for cumulative stats
    - Create other visual outputs to display
    - Separate tab/window in app for what Slippi can already do (replays, basic stats, etc.)
- Backend - Working with .slp files directly to compute more advanced statistics
    - Aggression % - What percent of the match were you running towards (aggressing) your opponent
    - How to measure a ledge guard
        - Hit to the ledge vs. Opponent willingly grabbing the ledge
        - Successful ledge guard vs SD’s

    - Easier match stats
        - Win % vs each matchup
        - Winning moves
- Local database work - Store calculations of .slp files locally in order to improve efficiency

Rough Roadmap:

- End of Fall Semester - Fork Slippi-Launcher and add a new stats tab.
    - Optional: store single game stats in a basic fashion (non-database), and display a summary on stats page
- Minimal Viable Product:
    - Add a new stats page to the launcher,
    - Generate cumulative statistics from all existing files, and visualize
    - Store results in SQLite database, & update incrementally as games are played
- Realistic additions:
    - Create a new single game advanced statistic (ie. whiff punish vs. counter-hit, aggression %, etc.)
    - Create a game state system used to contextualize sections of a game: ex: opening -> counterhit -> edgeguard -> kill -> opening -> …
- Stretch goals:
    - Match feedback system: ‘you should’ve done x at moment y’, ‘use x move more often’ etc.
    - Playstyle profile graph, using a spider chart
        - Requires advanced single game stats that inform cumulative playstyle
    - Use new stats as additional data for existing ML models that create AI players