

COMPLETE PROJECTS LIST

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Gridiron Gauntlet – *Game Design, Gesture Recognition, Collision Detection*

- Software Methods final project.
- Single player iOS clone of the Super Mario Party game, *Gridiron Gauntlet*. The player must avoid colliding with time-scaled moving enemies within the game board bounds for as long as possible.
- **Technologies:** Swift/Xcode, SpriteKit, UIKit, GameplayKit, CoreGraphics
- <https://bit.ly/gridironguntlet>

PIN? – *User Experience, Design, User Testing*

- Human-Computer Interaction final project.
- Encourages users to be curious via location-based information crowdsourcing.
- **Technologies:** Balsamiq, Markdown, Git, contextual inquiry, paper and digital prototypes, user testing
- <https://bit.ly/pindocs>

Cornell Box – *3D Graphics, Camera Controls, Transformations*

- Computer Graphics final project.
- Created a Cornell box featuring a rotating and bouncing sphere and cube with shadows, lighting, collision detection, and user-controlled camera in **three.js**.
- Follow up project is a rotating cube with a bespoke transformation system and user-controlled camera built in **WebGL**.
- **Technologies:** JavaScript, HTML/CSS, three.js, WebGL, linear algebra.
- <https://github.com/AlyssaWang/GraphicsPracticals>
- <https://github.com/AlyssaWang/GraphicsPracticals2>

Temperature Gloves – *Wearable Technologies, Circuit Design and Construction, Needle Arts*

- eTextiles final project.
- Programmed a pair of gloves to indicate temperature via LED gradient to inform the user whether to remove their gloves.
- **Technologies:** LilyPad Arduino, sensors, circuits, conductive fabrics, hand-stitching, embroidery.

ReqTrak – *User Accounts, Web Scraping, Data Store*

- EphHacks Best Execution Winner.
- Provides a centralized platform to help Williams College students keep track of which criteria they have completed/yet to complete in order to satisfy their major requirements.
- Prompts a user for a secure login, then maintains a persistent checklist of requirements for

their chosen major, sourced from a web-scraped list.

- **Technologies:** Javascript, Python, HTML/CSS, Google App Engine, Google OAuth.
- <https://bit.ly/ReqTrak>
- <https://bit.ly/reqtrakslides>

Joylent – *Web Development, Humor*

- HackRPI Funniest Hack Winner.
- Spoof of the Soylent website. Duplicated the features and design, but filled the content with a “replacement for human interaction” and images from our team’s impromptu photoshoot.
- **Technologies:** JavaScript, HTML/CSS, MS Paint, photography, sales pitch.
- <https://github.com/AlyssaWang/joylent>

Twitter Maps – *Web Scraping, Data Parsing, Data Visualization*

- Diving Into the Deluge of Data final project.
- Scraped Twitter for keywords and visualized the location data of those tweets with a choropleth map to compare the online presences of 2016 election candidates across the USA.
- **Technologies:** Python, JSON, Tweepy, Plotly, Twitter API, Google Maps API
- <https://bit.ly/twittermapsslides>

In Touch – *User Accounts, Data Store, Timed Notifications*

- CSCI final project. Helps first year college students manage a work-life balance.
- Prompts a user for a secure login, then maintains persistent contacts, notes, and class information. Users can also set reminders to contact relatives.
- **Technologies:** Javascript, Python, HTML/CSS, Google App Engine, Google OAuth.

Reading Into Twitter – *Web Development, Data Visualization*

- GWC Twitter final project.
- Provides Twitter metrics for the Top 10 NYT bestsellers to encourage people to read.
- **Technologies:** Javascript, HTML/CSS, Charts.js.