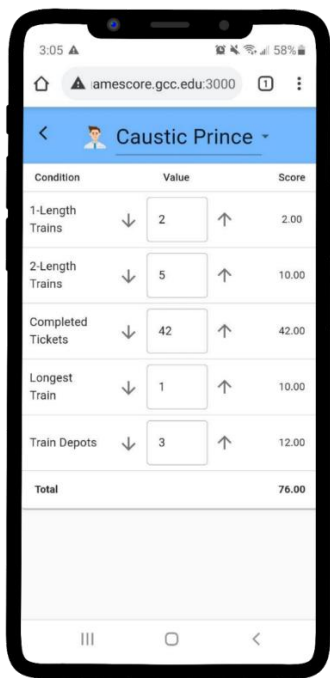


Senior Projects

Department of Computer Science



May 2021

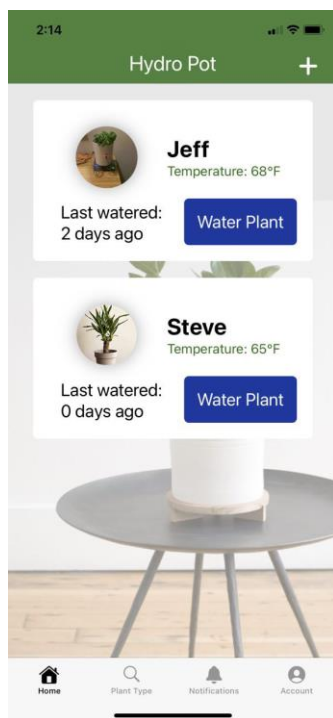


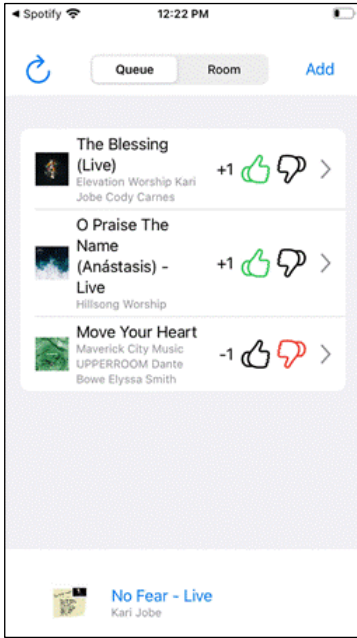
GameScore is a mobile web app that makes it easier to score complex board games. Players can use premade, game-specific templates to generate digital scorecards for the entire table. By listing the scoring conditions, validating user input, and tallying the results, GameScore facilitates a faster and more accurate scoring process. Players can also invite the other players to help score the game in real-time on their phones. If a user cannot find the perfect template, they can create their own or customize an existing template.

*Jonathan Beels, Joshua Benjamin,
Jonathon Lannon, and Nathan McNany*

Hydro Pot is an iPhone application and smart plant pot that allows users to easily monitor and water their plants from anywhere. Hydro Pot users can track the soil moisture, temperature, and sunlight level of their plant. They can also set the pot to automatically water the plant when dry. Users receive notifications when the pot detects a problem with the plant, such as being too cold or overwatered. When looking for new plants, Hydro Pot users can view plants that are well suited to the pot's environment.

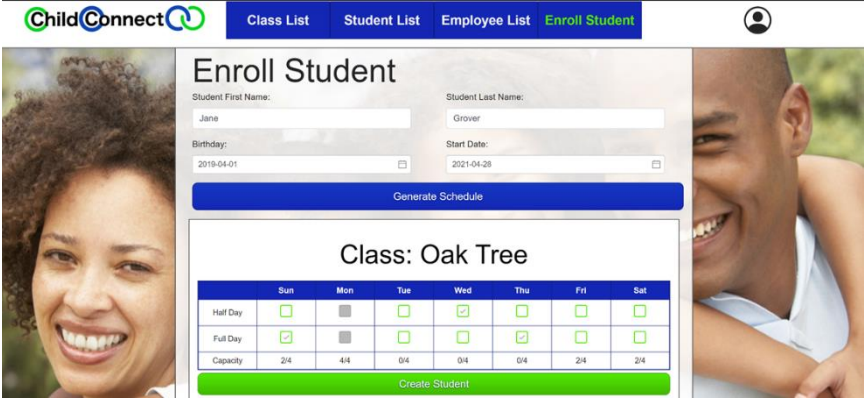
*David Dray, Ethan Harvey,
Spencer Lisle, and Harry Schreiber*





VoteNote is an iPhone application that allows users to collaborate in creating a music playlist for parties, restaurants, or other events. Everyone can add their own songs and vote on their favorites. Popular songs move to the front of the line so they play earlier. Hosts can choose which genres are allowed in the room, veto songs, and ban users as needed.

*Gabe Armstrong, Adam Cramer,
Wesley Curtis, and Patrick Reagan*



Child Connect is a web application that helps daycare staff easily track information about their students and forecast future classroom availability. Teachers can access information about their students, such as a profile picture, allergies, adults authorized to pick them up, and emergency notes. Teachers can also view aggregated allergy lists and permission slip trackers. Administrators can manage classroom information and enroll new students based on classroom availability.

Matthew Bennett, Liz Franz, Eric Martin, and Joshua Worley

The screenshot displays the Course Pilot web application interface. At the top, there is a navigation bar with a logo on the left and four menu items: "Scheduling", "Degree Report", "Majors and Minors", and "Profile". Below the navigation bar is a class schedule grid. The grid has columns for the days of the week (Monday, Tuesday, Wednesday, Thursday, Friday) and rows for time slots (9 AM, 10 AM, 11 AM, 12 PM, 1 PM, 2 PM, 3 PM, 4 PM, 5 PM). The schedule shows the following classes:

	Monday	Tuesday	Wednesday	Thursday	Friday
9 AM	WRIT 101		WRIT 101		WRIT 101
10 AM					
11 AM					
12 PM	COMP 141		COMP 141		COMP 141
1 PM	HUMA 102		HUMA 102		HUMA 102
2 PM					
3 PM					
4 PM					
5 PM					

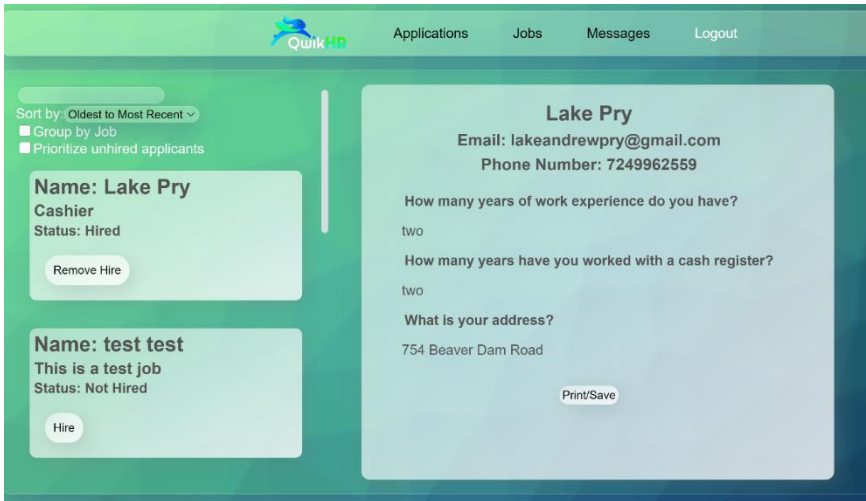
On the right side of the interface is a "Search Courses" panel. It includes a search input field labeled "Search for Class" and a list of search results:

- ACCT 201 MWF 9:00:00 - 9:50:00 Principles Of Accounting I A
- ACCT 201 MWF 11:00:00 - 11:50:00 Principles Of Accounting I B
- ACCT 201 MWF 13:00:00 - 13:50:00 Principles Of Accounting I D
- ACCT 201 MWF 14:00:00 - 14:50:00

At the bottom of the interface, there are three buttons: "Exit", "Save Schedule", and "Delete Schedule".

Course Pilot is a web application designed to help new and returning students navigate their semester schedules. Users can create, change, compare, and auto-generate class schedules. Additionally, users can edit an interactive Degree Report that tracks degree progress, so a student can plan for future courses. Users can view a list of majors and minors, including recommended minors that align with their current classes.

*Jacob Dybas, Nic Grube, Samuel Mendheim,
Izzy Patnode, and Jacob Ramseyer*



QuikHR is a Human Resources (HR) web application that allows a manager to see all applicants, hire applicants for a position, and message the applicants. The manager has a home screen where they can see all the jobs that they have posted as well as creating a new job. The manager can see all the applicants who have recently applied and be able to message them to set up an interview time. Applicants can see all the active jobs that the manager has created. They can easily apply without a login and will receive a confirmation email upon submitting their application.

Daniel DeGraaf, Matthew Lew, Jake Murphy, Lake Pry, and Nate Shaffer

HB CAZM Adam Accounting: Accounting Logout Search

Back

Status Sheet

Symbol Key

- ✖ = Course is Not Scheduled
- ✓ = Course has Been Taken
- ⓧ = Course is Scheduled for the Future

HUMANITIES CORE

- ✓ HUMA 102 - 3 Credits
- ✓ HUMA 200 - 3 Credits
- ✓ HUMA 202 - 3 Credits
- ⓧ HUMA 301 - 3 Credits
- ⓧ HUMA 303 - 3 Credits

[--- OR ---]

- ✓ HUMA 200 - 3 Credits
- ✓ HUMA 202 - 3 Credits
- ⓧ HUMA 301 - 3 Credits
- ⓧ HUMA 303 - 3 Credits
- ✖ RELI 211 - 3 Credits
- ✖ RELI 212 - 3 Credits

WRITING

Student Schedule

Show Intercession Semesters

Disclaimer: all course offerings are estimated based on available information

Fall 2018

Scheduled Credits: 14

+	ACCT 201	-	+	BIOL 207	-
+	MNGT 203	-	+	PHYE 100	-
+	WRIT 101	-	[Empty Box]		

Spring 2019

Scheduled Credits: 13

+	ACCT 202	-	+	ECON 102	-
+	HUMA 102	-	+	MATH 141	-
[Empty Box]					

Filters

Requisites Met

Major Requirement

Hide Scheduled Courses

Semester:

- + ABRD 300
- + ACCT 201
- + ACCT 202
- + ACCT 301
- + ACCT 302
- + ACCT 303
- + ACCT 305
- + ACCT 321
- + ACCT 401
- + ACCT 402
- + ACCT 403
- + ACCT 404
- + ACCT 405
- + ACCT 406
- + ACCT 410

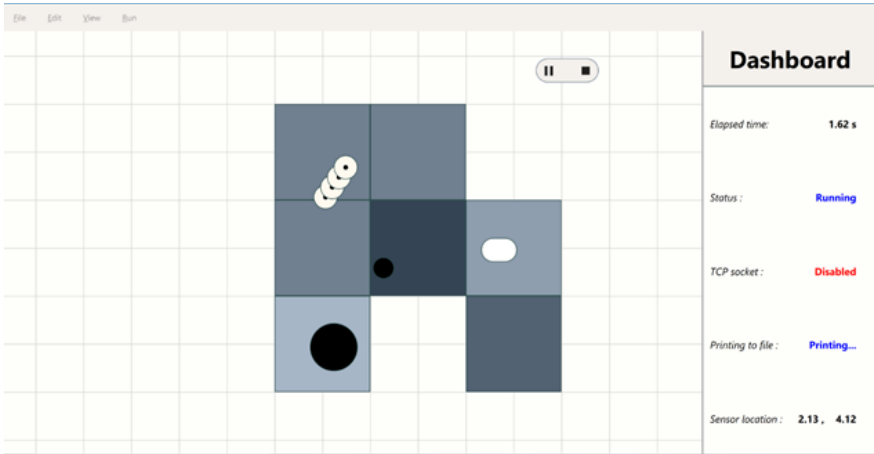
HB CAZM is an application to assist advisors with coordinating and validating advisee scheduling data. Advisors and students can build and refine a course schedule for their entire time at Grove City College by sending proposed schedules back and forth until they reach an agreement. Advisors can also message students to remind them to make edits to their schedule or to ask clarifying questions.

Christian Burns, Moriah Lehman, Alec Muchnok and Zachary Orlaski



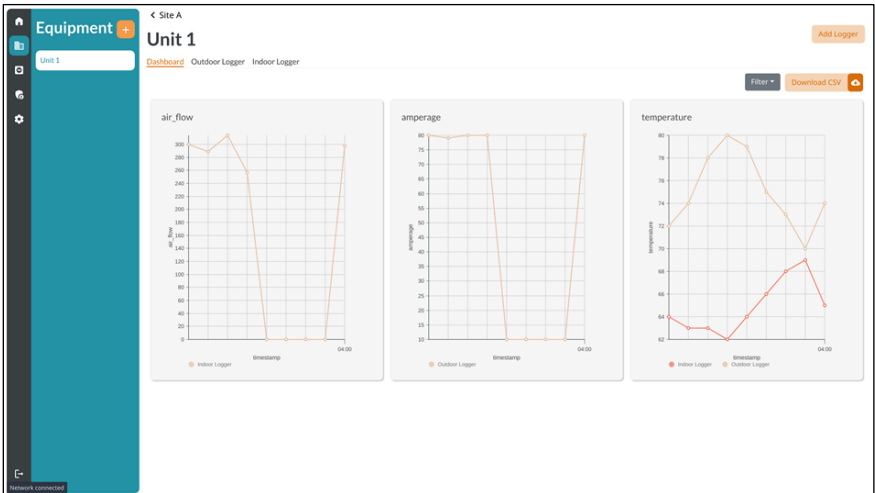
LifTrak is a web application that helps college strength and sport coaches assign workouts to athletes and send personalized questionnaires to keep tabs on the athletes' physical and mental wellbeing. Coaches can also choose to provide video presentations for workout techniques. Athletes can complete assigned workouts on their phones, and the coaches can view athletes' results over time for different exercises.

Joshua McNamara, Nathaniel Shi, Jonah Sutter, Jediah Madubuko



Gex is a cross-platform desktop app that allows engineers at Gecko Robotics to create synthetic data to help automate internal testing. The user can create a virtual surface with various features and run virtual sensors over the surface to gather synthetic data. The data can be saved to a file or sent via the network, where the engineer can use the data for testing.

Rachel Franklin, Spencer Gray, Stephen Stoltzfus, and Daniel Supplee



YADA (Yet Another Data Aggregator) is an open-source data aggregation system designed for use with HVAC systems. Utilizing inexpensive hardware sensors and an intuitive web frontend, technicians and researchers can employ custom python scripts to calculate data values and detect HVAC unit faults in real time. Users are also able to group units for easy navigation, view live data, filter values as desired, and export the data for further analysis.

Luke Donmoyer, Shaun Jorstad, Brendan Ortmann, and Steven Smiley

Computer Science Student Recognition Award

Presented by the Computer Science faculty in recognition of a graduating senior's academic achievements and service to the department and community

Eric Martin will graduate *summa cum laude* with a Bachelor of Science in Computer Science and minors in Mathematics and Data Science. He has demonstrated an exceptional record of academic achievements, service to the department, and collegiality with faculty and his peers.



He earned a place on the Dean's List with High Distinction every semester and is a member of Sigma Pi Sigma, a physics honorary society. His senior capstone project, Child Connect, helps daycare staff easily track student information and forecast future classroom availability for incoming students.

In 2019-2020, Eric earned the department's "Outstanding Student Assistant" award for his quality work with department faculty. He is an IM sports enthusiast, coordinating ping pong and tennis and playing volleyball, spikeball, softball, soccer, basketball, badminton, and dodgeball over the course of his college career.

He completed an internship at Angelique, Inc. where he extracted over two billion unique email addresses from a data set. He also worked as an intern at TA Instruments, modernizing their software development processes. He has secured a highly sought position as a Software Development Engineer at Amazon in the DC area, where he will work after graduation.