

# Joshua Ryals

[joshryals.com](http://joshryals.com) | 904-553-7303 | [ryalsj@ufl.edu](mailto:ryalsj@ufl.edu)

## EDUCATION

University of Florida, Gainesville, FL  
Bachelor of Science in Computer Engineering

*Expected Graduation: Dec 2021*  
*Cumulative GPA: 3.84/4.00*

## WORK EXPERIENCE

**Engineer Intern** - Carlisle Construction Materials (Lake City, FL), *May – Aug. 2019*

- Designed and implemented a test plan to analyze product quality as a function of run time and other process factors
- Performed thorough analysis on testing data to identify solutions which led to a 2% improvement in plant utilization
- Organized and presented project results and solutions to local management as well as the corporate engineering team

## PROJECTS

**StudyDate**, *Apr. 2020-present*, [studydate.app](http://studydate.app)

- With a team of peers, developed a mobile application for both android and iOS which has so far been used by over 500 UF students to connect with their classmates in a world of social distancing and online classes
- Used Firebase tools, including authentication, database and cloud functions, to create back-end functionality which matches students, sends push notifications and provides chat functionality among other services.
- Utilized HTTPS requests with Zoom API's to allow users to create and join zoom meetings within the app

**Suturing VR** - Dream Team Engineering UF, *July 2020*

- Created a VR game to provide a soothing experience to patients preparing to undergo procedures at local Shand's Children's hospital
- Utilized Unity to create a multi-scene, interactive 3D game which allows users to explore various areas of nature (forest, ocean, desert) and collect points by spotting various animal animations.
- Used C# scripting to ensure proper scene interaction and cross-scene logic

**Path Finding Visualizer**, *May 2020*, <https://ryalsjosh14.github.io/PathFinder>

- Developed an interactive web application which implements famous path-finding algorithms and visualizes their completion on a 25x60 grid.
- Efficiently implemented both Dijkstra's algorithm and A-star search using the appropriate minheap data structure
- Utilized React and CSS styling to create a functional and appealing front-end single page application user interface

**Personal Website**, *August 2020*, [joshryals.com](http://joshryals.com)

- Built a single-page application with React which portrays a more holistic view of my experiences and interests
- Created an interactive interface using third-party libraries alongside CSS styles and animations

## CAMPUS & COMMUNITY LEADERSHIP

**Executive Board – Chaplain** – Pi Kappa Phi, *Nov. 2019 - present*

- Plan, organize and oversee all new member meetings and rituals
- Communicate with the national organization to ensure the new member process follows the national standard
- Serve as voting member of the executive board, making all executive decisions of the organization

**Teaching Assistant** – University of Florida (Gainesville, FL), *Jan. 2019 – May 2019*

- Assisted students in understanding and applying fundamental programming concepts in MATLAB
- Collaborated with team of other student TA's and faculty to consistently improve class learning environment.
- Provided constructive feedback while grading homework assignments and exams

**Project Captain** – Project Makeover UF, *Nov. 2018 - present*

- Serve on construction team during Makeover weekend, a three-day event of refurbishing a local elementary school through construction, landscaping and art projects
- Assist the construction director in planning and completing all construction projects for Makeover weekend
- Assist directors in fundraising and volunteer recruitment throughout the months prior to Project Makeover weekend

## CERTIFICATIONS / SKILLS

- Programing Languages: Python, JavaScript, C++, Java, HTML, MATLAB
- Development Tools: Numpy, React / React Native, Firebase, Git, HTTPS, Node.js
- Eagle Scout, *July 2017*