Yash Kamothi
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Education

Bachelor of Science in Computer Engineering – GPA 3.4
University of California, Riverside – Class of 2017

Experience

General Atomics Aeronautical Systems July 2017 - Present
Software Developer

- Implement software design for Unmanned Air Vehicle (UAVs), and for ground stations that control the planes and drones.
- Create cross-platform applications in C++, C, and C# to be used across all planes and ground systems.
- Develop documentation to accurately reflect software system changes and future framework.
- Team lead for unit and integration testing of software builds.
- Maintain code by debugging and updating to keep pace with the evolving user requirements and specifications.
- Mentor newer developers unfamiliar with UAV system and code architecture.
- Brought over an Agile work environment, which utilizes Kanban and Scrum practices for better development and management.

University of California Riverside, School of Medicine January 2016 - Present
Software Engineering Intern

- Design dynamic and browser compatible pages using HTML5, CSS3, and Javascript.
- Create forms to collect and validate data from the user in HTML5 and AngularJS.
- Utilize ZohoCreator to create and modify web application forms.
- Debug code for ongoing software development and preexisting programs.
- Develop documentation on GitLab Wiki for both personal and team constructed programs.
- Assist IT Helpdesk with on going problems and incidents.

Space Systems Loral June 2016 - September 2016
Software Engineering Intern

- Create applications in JavaScript and C that extract data from files, and conduct arithmetic calculations.
- Push parsed data into MongoDB and PostgresQL with appropriate JSON formats.
- Unit testing, integration testing, and end-to-end testing to cover all edge cases and prevent run time errors.
- Optimize software code for projects within department by means of modularization, efficiency, and durability.
- Create algorithms and data structures that accurately allow parser engine to function with desired output.
- Develop documentation on GitLab Wiki for both personal and team constructed programs.
- Utilize Windows, MingGW, Cygwin, NPM, Gulp, Node, and Atom for development environment.

Projects

Some of my on-going and finished projects that can be found on GitHub with their respective documentation: https://github.com/ykamo001

- ***BigData*** – A Big Data analyzation application I created that utilizes Artificial Intelligence properties like k-fold cross validation and nearest neighbor algorithms to find the best features to use for classification. It implements forward selection, backwards regression, and a custom algorithm I remodeled to gain accurate and useful information about the data. I have written a report on my findings with sample data and results.
- **PathFinder** - A Big Data search application that implements Artificial Intelligence properties like the A* algorithm and admissible heuristics to determine if a solution for an 8-puzzle exists or not, and determines the path needed to reach the solution with minimal moves. The program can implement three different heuristic algorithms, and I have written a report on my findings about the results.
- ***GuitarHero*** - A game, much like the famous Guitar Hero, except that it runs on a breadboard with basic electrical components. I programmed and built the entire game from scratch - here is a link to a video I made which briefly shows the game in action and goes over the components: https://www.youtube.com/watch?v=i45QvAkXZts