IKRA MONJUR

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EDUCATION

Cornell University, Ithaca, NY *Expected May 2021*
BS in Computer Science
GPA: 3.6 (Dean's List – Spring 2018, Fall 2018, Spring 2019)

Relevant Coursework: Object Oriented Programming and Data Structures • Discrete Structures • Digital Logic and Computer Organization • Data Structure and Functional Programming • Introduction to Game Architecture • Embedded Systems

SKILLS

Technical Skills: Java, Python, HTML/CSS, JavaScript, OCaml, C, Git, Robot Operating System (ROS), Verilog

RELEVANT EXPERIENCE

Software Engineering Intern *May 2019 – Present*
Hewlett Packard Enterprise, Fort Collins, CO

- Design and implement new features on a web application to easily run scripts without using the command line and generate reports using data from an API
- Create design specifications and other documentation associated with software development process
- Develop using ASP.NET and Visual Basic

Undergraduate Research Assistant *September 2018- Present*
Autonomous Systems Lab, Cornell University, Ithaca, NY

- Improve the localization of an autonomous mini robotic car for AI Driving Olympics Competition
- Implement a particle filter in order to localize objects in the mini robot town using python
- Collaborate with other team members to integrate the code onto the robot using Robot Operating System (ROS)

Navigation Team member *September 2018- Present*
Cornell Autonomous Bicycle – Project Team, Cornell University, Ithaca, NY

- Work on a research project aimed to create a self-steering, self-navigation, and self-balancing bicycle
- Collaborate with other team members to enhance the autonomous bike's navigation system
- Integrate the Kalman filter in real-time navigation using python to improve the accuracy of the bike

PROJECTS

Amaris: Realm of Dreams *January 2019 – May 2019*

- Created a game using LibGDX, Java, and Box2D library in a team of programmers and designers
- Implemented interaction between player and multiple obstacles/objects, and the animation into the game individually
- Completed a puzzle-platformer game that includes seamless game physics, unique art, and multiple levels

Color Memory Game (Hardware) *April 2019 – May 2019*

- Collaborated with a partner to create a hardware-based game using an Adafruit RGB sensor as the input and C
- Interfaced the sensor with the FRDM K64F board using i2c bus
- Displayed the RGB values on TeraTerm using UART serial communication

Othello/Reversi Game *November 2018 – November 2018*

- Worked in a team of four to create a text-based game of Othello using OCaml
- Developed different game modes including a two-player version, an AI version using the minimax algorithm, and a training/learning mode
- Implemented a variety of commands such as put, undo, preview, recommend (from AI), save, load etc.
- Completed many additional functions individually to make commands such as undo work seamlessly

Android Planner App *January 2017 – February 2017*

- Designed and developed an android planner app using Android Studio with two group members
- Integrated the app's calendar with the NYC school calendar to include holidays and breaks during the school year
- Programmed basic functionalities of a planner including the ability to add/edit homework, tests, events etc.