

IKRA MONJUR

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EDUCATION

Cornell University, Ithaca, NY

Expected May 2021

Bachelor of Science in Computer Science

GPA: 3.6 (Dean's List – Spring 2018, Fall 2018, Spring 2019)

Relevant Coursework: Digital Logic and Computer Organization • Game Architecture • Embedded Systems • Database Systems (FA19) • Machine Learning (FA19) • Text Mining (FA19)

SKILLS

Technical Skills: Java, Python, HTML/CSS, JavaScript, OCaml, C, Git, .NET, Visual Basic, Robot Operating System (ROS)

RELEVANT EXPERIENCE

Software Engineering Intern

May 2019 - August 2019

Hewlett Packard Enterprise, Fort Collins, CO

- Designed and implemented content repository maintenance and reporting features on a web application using an API
- Optimized the team-members' time by making overly-done tasks such as modifying ownership/deleting folders and acquiring reports including account roles more efficient
- Created design specifications, maintenance documents, and user documentations associated with software development process
- Learned ASP.NET and Visual Basic on my own in order to develop the web application

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 a team member to integrate the code onto the robot using Robot Operating System (ROS)
- Write a report at the end of the semester and present project to the entire lab

Navigation Team member

September 2018 - May 2019

Cornell Autonomous Bicycle – Project Team, Cornell University, Ithaca, NY

- Worked on a research project aimed to create a self-steering, self-navigation, and self-balancing bicycle
- Collaborated with other team members to enhance the autonomous bike's navigation system
- Integrated the Kalman filter in real-time navigation using python to improve the accuracy of the bike
- Researched many GPS systems in order to replace current GPS to improve the bike's localization

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
- Selected for showcase at the Boston Festival of Indie Games

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