

## Education

UNIVERSITY OF ILLINOIS URBANA CHAMPAIGN

DEC 2020

Bachelor Of Science, Computer Engineering

GPA 3.73

## Technical Skills

**Knowledgeable :** C#, C++, C, Python, Mendix, Web Dev, Ionic, Angular 4, CSS, HTML

**Intermediate:** Java, Microcontrollers

## Experience

G-SQUARE SOLUTIONS

JUNE - JULY 2018

SOFTWARE ENGINEERING INTERN

- Created a hybrid mobile app to bring a BI analytics tool from the browser to Android and IOS devices using Angular 4, HTML, SCSS. Published it on the Play Store (Ask Narrator).
- Implemented a SVM model to filter out useless content from a website that published detailed economic reports and generated a summary of the report.
- Coded the Heston and Hull-White financial models using the Monte Carlo simulation to accurately simulate the ROI of two Financial Instruments.
- Optimized existing python code used to retrieve news articles of a given company name to increase accuracy by 70%.

OMNIX INTERNATIONAL

JUNE - JULY 2017

SOFTWARE ENGINEERING INTERN

- Created a web based Timesheet application for employees and project managers using the MENDIX RAD software currently in use at the company. Used a SQL database to manage the requests and users.

## Leadership

ILLINOIS ROBOTICS IN SPACE

SEPTEMBER 2017 - PRESENT

PATH PLANNING LEAD FOR NASA RMC

- Leading the path planning sub-team for the NASA Robotic Mining Competition.
- Training a path finding neural network for an autonomous robot using a genetic evolution algorithm.
- Used OpenCV, a webcam, and an offset checkerboard pattern to localize the robot.
- Helped use a Kinect in obstacle detection by generating a point cloud, smoothing it into slopes, then transforming the gradient into a grid with squares that are obstacles and not obstacles using C++.

## Research

ILLINOIS GEOMETRY LAB

SEPTEMBER 2018 - PRESENT

UNDERGRADUATE RESEARCHER

- Working under Professors Richard Sowers and Manuel Hernandez to create a VR component of a test bed for understanding responses to visual stimuli and its relation to Parkinson's disease and other movement disorders.

## Project Highlights

COURSE TRACKER

JULY 2018 – AUGUST 2018

- Implemented a python backend and a hybrid Android and IOS app to track the status of any UIUC course to help register in high demand classes.
- Launched a python flask server combined with nginx and docker using OpenShift for the backend of the app to update the class databases and status of the courses being tracked every few minutes.
- Sends a notification to the mobile device of the user once a seat opens up using firebase.

NEWS BOT

SPRING 2018

- Collaborated with a team to create a bot for web scraping news articles from popular news websites to aggregate data for use with Alexa using beautiful soup in python.

HANDWRITTEN DIGITS RECOGNIZER – NEURAL NETWORK

SUMMER 2017

- Implemented a neural network from scratch that can recognize handwritten digits of a human with an accuracy rate of 95% in sample size of 10000 images. (Python)

## Honors

**DEAN'S LIST:** Distinction awarded to recognize the top 20% students of the college.

**5TH POSITION - PROGRAMMING CONTEST:** 5<sup>th</sup> Place in the Computer Systems and Programming course out of #150 students.