

Belal M. K. Said

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Education

Rutgers University-New Brunswick

9/2015 - 5/2019

— B.E. in Mechanical Engineering & B.S. in Computer Science
GPA: 3.83/4.00

Relevant Coursework: Data Structures, Computer Architecture, Discrete Structures, Probability Theory, Artificial Intelligence

Skills

Advanced: C/C++, Java, Matlab, C#

Proficient: Javascript, PHP, Python, HTML, CSS

Technologies: Unity, Node.Js, AWS, React

Other: Solidworks, Simulink, Access

Experience

Colgate-Palmolive - Incoming Software Engineering Intern - Piscataway, NJ

6/2017 - Present

— Develop APIs for standardized data access

AllState Insurance - Intern - Edison, NJ

6/2014 - 9/2014

— Wrote an algorithm in Python that determines which customers are more likely to buy AllState insurance
— The algorithm would use a custom score to sort potential customers based on their likelihood to switch insurance and then would optimize with feedback from customer service, increasing productivity by 18%

Research

SteerSuite under Professor Mubbasir Kapadia - New Brunswick, NJ

6/2016 - 8/2016

— Coordinated with a team of PhD students to optimize SteerSuite, a crowd simulator written in C++, cutting simulation time by 12% on average
— Developed an algorithm that uses directed graphs to model human behavior in rooms
— Designed a C# plugin for Autodesk Revit to incorporate SteerSuite and make it user friendly

Mechatronics Lab under Professor Jingang Yi - New Brunswick, NJ

10/2015 - 3/2016

— Worked with Engineering graduate student to build and design quadcopters
— Programmed quadcopter in C++ and PX4 Autopilot to perform complex maneuvers
— The aim of the project is to be able to coordinate between quadcopters and rooms sensors to ease indoor navigation

Extracurriculars

IEEE - PacBot Team Captain

10/2015 - Present

— Created an algorithm for the bot to navigate a maze and avoid the ghosts. The robot was designed from scratch with a custom PCB circuit and a 3D printed body. The code was optimized in C++ to run on a teensyduino
— Won first place at Harvard PacBot Competition 2017

International Sanitation Organization - Founder

7/2013 - Present

— Helped fundraise for ISO, a legal 501c3 certified non-governmental organization, which has collaborated with UN recognized organizations to bring fresh water to thousands of people in Africa. More information can be found here: www.international sanitation.org

Projects

Internet of Things

1/2014 - Present

— Connected home electronic devices such as lamps, fridges, and microwaves to the internet through an electrical IMP
— Created a RESTful API to pipeline communication between computer devices and the appliances
— Won Internet of Things award from Microsoft

WAEC

6/2016 - 9/2016

— WAEC is a startup that works on creating profitable automated drone delivery systems
— Programmed the entire system for air highways and programmed the drones to move in them using a GPS System
— The highway system was designed using 3D spline parameterization which the drones follow using PID systems

C# Raytracer

7/2012 - 8/2014

— Developed a raytracer from scratch based on the book *Physically Based Rendering* by Matt Pharr
— The goal of the project was to test new raytracing and parallel computing techniques such as photon mapping and distributed computing