Belal M. K. Said

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Education

Rutgers University-New Brunswick **09/2015 - 05/2019**
— 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, Dynamics, Circuits

Skills

Advanced: C/C++, Java, Javascript, C#, Matlab
Proficient: PHP, Python, HTML, CSS, ABAP
Technologies: OpenCV, Unity, Node.Js, AWS, React, SAP
Other: Solidworks, Simulink, ANSYS

Experience

Colgate-Palmolive - Software Engineering Intern - Piscataway, NJ **06/2017 - Present**
— Develop APIs for standardized data access

AllState Insurance - Intern - Edison, NJ **06/2014 - 09/2014**
— Increased customer service productivity by 25% using an algorithm that determines which customers are more likely to switch insurance
— The algorithm would use a custom score to sort potential customers and optimize with feedback from customer service

Research

SteerSuite under *Professor Mubbasir Kapadia* **- New Brunswick, NJ** **06/2016 - 08/2016**
— Reduced simulation time by 17% by implementing bounding boxes and Dynamic Bounding Volume Hierarchies
— 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 - 03/2016**
— Worked with Engineering graduate student to build and design quadcopters
— Programmed quadcopters 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**
github.com/belalmksaid/PacBotCode
— 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 **07/2013 - Present**
internationalsanitation.org
— 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.

Projects

Internet of Things **01/2014 - Present**
github.com/belalmksaid/ioi
— Connected home electronic devices such as lamps, fridge, microwave, and an old minivan 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 and Intel

Waec **06/2016 - 09/2016**
github.com/belalmksaid/waec
— Designed the codebase for air highways in C++ and programmed the drones to move in them using a GPS-based PID system
— The highway system uses 3D spline parameterization and relies on the open source Generic Graphics Toolkit Library for math functions

C# Raytracer **07/2012 - 08/2014**
github.com/belalmksaid/Disque-Raytracer
— Developed a raytracer from scratch using a custom built Math library and Alea GPU
— Applied parallel computing techniques such as photon mapping and distributed computing, cutting render time by at least 95%

TrackrAPI **07/2014 - 08/2014**
github.com/ericsong/TrackrBot
— Wrote a platform that lets users create custom APIs for dynamic data on a website of the user's choice
— Won first place at CodeDay NY 2014