Belal M. K. Said

belalmksaid belalmsaid http://belalsaid.com belalmksaid@gmail.com (732) 372-1253

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 using a Node.Js server to pull data from SAP's HANA and make it user friendly
— Built the code base for the Colgate-Palmolive Human Genome Project by implementing HANA tables and connecting them to a server
— Set up the server and database for the Learning Center, revamped the UI, and launched the product for company employees

AllState Insurance - Intern - Edison, NJ **06/2014 - 09/2014**

— Increased customer service productivity by 25% using an algorithm that determines which customers are 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* **- Research Assistant - 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* **- Research Assistant - 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, optimized to run on teensyduino. The robot was designed using a custom PCB circuit and a 3D printed body
— **Won first place at Harvard PacBot Competition 2017**

International Sanitation Organization **07/2013 - Present**
internationalsanitation.org

— Helped found and 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, a fridge, a microwave, and a minivan to the internet through electrical IMPs and mapped it to a Node.Js server
— **Won Internet of Things award from Microsoft and Intel**

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%

Waec **06/2016 - 09/2016**
github.com/belalmksaid/waec

— Built the codebase for air highways in C++ and PX4 Autopilot using 3D spline parameterization
— Designed the drone autonomous system using a GPS-based PID system

TrackrBot **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**