Sang Park

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Profile

- Online Portfolio: https://sangpark4.github.io/
- Developed knowledge in a variety of engineering fields, such as mechanical systems, app development, and environmental engineering through multiple projects.
- Over 4 years of experience as a basketball player, which developed a team-oriented mindset.

Skills

- Proficient in C, MATLAB, Simulink, Maple, SolidEdge, Siemens NX, HTML/CSS
- Adept with Microsoft Word, Powerpoint, Excel
- Fluent in Korean and English

Education

Bachelor of Applied Science: Applied Mathematics and Mechanical Engineering **Candidate 2021**
Queen's University - Kingston, ON

- Received the distinction of Dean's Scholar in first year.
- Relevant Courses: *Thermodynamics, Solid Mechanics, Fluid Mechanics, Real Analysis, Complex Analysis, Linear Algebra, Calculus, Statistics, Machine Design, Control Theory*

Work and Volunteer Experience

Teaching Assistant, Queen's University; Kingston, ON **January - April 2021**

- Helped students understand engineering drawings and how to model products through SolidWorks for the course *Engineering Graphics (APSC 162)*

Teaching Assistant, Queen's University; Kingston, ON **September - December 2019**

- Assisted first year engineering students learn MATLAB and C Programming by providing relevant feedback on labs for the course *Introduction to Computer Programming (APSC 143)*

Assistant Coach, Webber Academy; Calgary, AB **2015 - 2017**

- Coached junior high basketball teams and elementary students by teaching younger players what was learned from playing at a higher level.
- Awarded an Extracurricular Medallion in 2016.

Terry Fox Organizer, Webber Academy; Calgary, AB **September 2016**

- Organized the Terry Fox Run event at Webber Academy, raising over 40,000 dollars for the Terry Fox Foundation.

Project Work

Stochastic Control of a Multi-Agent System for Fleet Management **September 2020 - April 2021**

- Implemented reinforcement learning algorithms to manage a fleet of warehouse robots and maximize throughput in an Amazon warehouse.

Gearbox Project **January - April 2020**

- A shifting one-stage gearbox system that included gears, pinions, input and output shafts, bearings, and housing was designed and modelled using Siemens NX to maximize torque and speed.

Controlling the pH Levels of Drinking Water **January - April 2020**

- Using principles of control theory, such as PID-controllers, Bode and Nyquist plots, transfer functions, and linear time-invariance, a system was designed to control the quality of drinking water.

Optimization of Identifying Deforested Regions in the Amazon Rainforest **October - December 2018**

- Utilized Lloyd's Deployment Algorithm to find an optimal identification system in order to treat deforested areas in the Amazon rainforest.

Removal of Plastics in Sewage Systems **September - October 2018**

- Designed a plastic filtering system that would be placed in wastewater treatment plants to filter macro and micro plastics in waterways.

Sexual Assault Centre Kingston Guidance Mobile Application **January - April 2018**

- Built an application with JavaScript and Android Studio to educate and provide guidance to victims and other interested young adults.

Mars Colony **September - October 2017**

- Designed a sustainable colony on Mars with the resources that are already present on the planet and the few that can be brought from Earth.