# Jun Young Kim

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## EDUCATION AND SKILLS

**University of Waterloo Faculty of Engineering** Waterloo, ON
*1A Bachelor of Applied Science in Electrical Engineering, Honors, Co-op* Expected Graduation 2028

- **Software:** Inventor, Python, C++, SOLIDWORKS, Illustrator, Premier Pro, AutoCAD, Revit, Arduino IDE, Altium, Excell
- **Technical:** 3D Design, 3D Printing, Breadboard Circuits, Soldering

## LEADERSHIP AND WORK EXPERIENCE

**Search Engine Optimization Engineer** Oakville, ON
CSW (Chill . Study . Work) February 2024 - April 2024

- Responsible for creating derivative sites for CSW's main website to drive traffic, leveraging relevant search results and trends.
- Adapted SEO strategies to maintain growth, utilizing data-driven insights and making informed decisions for continuous improvement in organic search traffic.
- Crafted HTML-written articles targeting specific keywords, optimizing content for search engines, and boosting website ranking through SEO best practices.

**Design Team Lead/Founder** Oakville, ON
Team 9263 - ALD Lions September 2022 - June 2023

- Pioneered the creation of a FIRST Robotics Team, demonstrating an ability to identify opportunities and take the initiative to turn ideas into reality.
- Spearheaded a multidisciplinary team of engineers as design team lead, facilitating team meetings to distribute the development of aspects of a complex robot and working with sub-teams to create the best design.
- Learned industry-grade programs such as SOLIDWORKS to design functional drivetrains, chassis, and more.

**Cashier/Customer Service Representative/Barista** Oakville, ON
Second Cup Oakville August 2021 - August 2023

- Developed communication skills to build rapport with customers, and promoted company values.
- Managed cash flow operations, totaling $500 - $1,000 per shift.
- Memorized over 45 menu items to serve 200+ customers per day.

## PROJECTS

**BrailleEye: AI Braille Label Maker** ***//C++, 3D Printing, 3D Design, Arduino IDE, Circuitry Design, Edge Impluse***

- Integrated a Braille label maker and ESP32 microcontroller, enabling communication between the two devices by using the ESP32's camera module to interface with an AI model trained through Edge Impulse, facilitating real-time object detection.
- Engineered a sophisticated system of converting detected object names into Braille, which involved translating each letter of the identified object's name into corresponding angles, precisely controlling a stepper motor to turn the dial of the Braille label maker.

**Bionic EVO: Prosthetic Arm** ***//C++, SOLIDWORKS, LaTeX, 3D Printing, Arduino IDE, Circuitry Design,***

- Leveraged 75 months of expertise in C++ programming and circuitry design to create an efficient control system
- Worked with emerging technology such as electromyography sensors to capture muscle movement which enabled an intuitive control interface for the prosthetic hand.
- Harnessed 2 years of SOLIDWORKS experience skills via a mentor to create a functional 3D design for the prosthetic that advanced 25% efficiency per iteration, creating an intuitive design for 3D printing.

**Gyro Controlled Excavator Arm** ***//C++, SOLIDWORKS, 3D Printing, Circuitry Design, Arduino IDE,***

- Leveraging SOLIDWORKS modeling to design a compact and efficient robotic arm structure incorporating three servo motors to enable precise movement of each joint, demonstrating experience in CAD design and robotics engineering principles.
- Implemented advanced MPU-6050 Accelerometer technology into the robotic arm system and refined soldering techniques to seamlessly integrate the gyroscope with the microcontroller, ensuring precise control over the arm's movements.

## AWARDS & CERTIFICATIONS

- **Rookie All Star Award, Highest Rookie Seed** | ONT District Western University Engineering Event 2023
- **Rookie Inspiration Award** | FIRST Ontario Provincial Championship - SCIENCE Division
- **10 Course Excellence Awards** | 2019-2023
- **Top 3 I-STEM Project Award I-STEM Expo** | 2022