Hi, my name is

Kohmei Kadoya

I seamlessly integrate robotics and software.

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Technical Skills

Programming:

- C++
- Java
- Python
- HTML
- Javascript
- React
- MATLAB

Software:

- Solidworks
- Fusion 360
- ROS
- Firebase
- Simulink
- Abobe XD

Foreign Language:

- Japanese

Interests:

UX Design Blockchain Video Production

Education

2019-2023 — **B.S. in Robotics Engineering**

Worcester Polytechnic Institute (WPI)
Worcester, MA — **GPA 3.84**

2015-2019 — **High School Diploma**

Williston Northampton School (WNS)
Easthampton, MA — **GPA 3.96**

Experience and Projects

March 2021 — Brigham and Women's Hospital Application

- **Lead a 11 person team** to create a JavaFX application for the Brigham and Women's Hospital that supported employees and administrators with their daily tasks
- Ensured that the communication throughout the team was clear with **Agile Scrum** Methods for project management with **daily scrum** meetings and retrospectives
- Won "**best overall feature**" for our service request system, which allowed patients to create tickets to request hospital services and follow Covid-safe entry procedures
- Integrated various APIs including **Google Maps** and **Twillio** and designed a scalable and encrypted **SQL** database to securely handle patient data
- Followed Google's **Material Design** guidelines by utilizing AdobeXD and JPheonix to mockup, create, and improve the UX on the **mobile**, **kiosk**, and **desktop views**

January 2021 — Lyft Autonomous Vehicle Motion Prediction

- Explored various **deep learning** method to predict the future position of vehicles
- Developed models that combine the strengths of CNN, RNN, LGBM and other models
- Created methods to sample the dataset and **ensemble** multiple learners for efficiency
- Competed in the Lyft challenge where we ranked among the **top 20%** of teams

October 2020 — Automated Ball Sorting with 3 DOF Arm

- Used MATLAB to communicate between a webcam, Ubuntu, and a microcontroller
- Performed **automated camera calibration**, image processing, and **state machine** based error detection to create a robust, fully automated arm that sorts colored balls
- Implemented forward and inverse kinematics for both joint and **task space control**
- Generated trajectories between task space coordinates for smooth motion control
- Recognized by the professor for creating a **reliable software** architecture that works consistently by correcting for kinematic, lighting and obstacle errors

May 2020 — Design and Manufacturing for Combat Robotics

- Lead teams to **design for manufacturing**, create prototypes, and continuously and iteratively improve multiple combat ready robot for competitions in the area
- Optimized stiffness to weight ratios using Solidworks **FEA analysis** and created manufacturing tool-paths using Fusion360 CAM
- Utilized WPI's machine shop to **CNC mill, turn**, laser-cut and 3D print various materials

October 2019

Want to see more projects? Check out my website!