

Shrey Kavi

Computer Engineering, 4th year

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Technical Skills

Backend:

C/C++	ROS
Python	Laravel
Flask	Bash
NodeJS	Git
MongoDB	SVN
SQL	JSON

Hardware:

Robot Sensors	FPGA
ARM Assembly	VHDL
Raspberry Pi	Linux
Arduino	
Logic Analyzer	
Communication Protocols (SPI, I2C, UART, GPIO, JTAG)	

Programs:

Altera Quartus	Hadoop
MATLAB	Spark
Gazebo	Kafka
MultiSim	AutoCAD
Saleae Logic	
Keil ARM MDK	
Code Composer Studio	

Education

BASc Computer Engineering

University of Waterloo
2015 – 2020

Received President's
Scholarship in 2015.

Relevant Courses:

Distributed Computing
Computer Security
Operating Systems
Algorithms and Data Structures

Work Experience



Software Developer

Clearpath Robotics Inc. - Kitchener, ON (Sep – Dec 2018)

- Developed autonomous docking algorithm for automated charging
 - Setup GPS navigation with SwiftNav Duro and RTK satellite positioning
 - Improved Gazebo simulation environments for development
- [ROS, RVIZ, Gazebo, 2D/3D Lidars, RTK GPS, IMU, SNMP, EKF, SLAM]



Hardware Firmware Developer

Miovision Technologies - Kitchener, ON (Jan – Apr 2018)

- Developed microcontroller firmware to control testing hardware
 - Enhanced existing firmware features and performance
 - Created applications to gather and organize hardware test data
- [Code Composer Studio, Tiva microcontroller, C++, Python, Linux, SPI]



Web Developer

RBC Global Asset Management - Toronto, ON (Jun – Sep 2017)

- Full-stack development for applications used by thousands of advisors
 - Reconstructed third-party web tools using React framework
 - Pushed apps to production and patched critical bugs
- [React, JQuery, Laravel, SQL, Git, Bash, JavaScript, ES6, HTML5, CSS3]

Projects

Thermonitor (Present)

ESP8266 WIFI module with FreeRTOS leveraging a NodeJS backend to monitor and optimize temperature and humidity conditions of its environment

Kirsch Edge Detector (Jul 2018)

FPGA board for digital image processing; loads groups of pixels and compares the brightness of each pixel to its surrounding pixels for edge detection

MP3 Player (Nov 2017)

Keil ARM microcontroller programmed to decode, buffer and play WAV stereo music files from FatFS with an LCD to display song titles and 4 control buttons

Benny-bot (Aug 2017)

Slackbot translates French to English using Google Translation API with user confirmation system which contributes to a growing database of translated data

Reaction Game (Jan - May 2017)

Keil ARM microcontroller used to capture user reaction times and display microseconds to LEDs using interrupt service routines and polling subroutines

Waitless (Sep 2016)

Automated restaurant attendant using RC vehicle; designed with Arduino C and Bluetooth communication from Android phones during HackTheNorth