Shrey Kavi

Computer Engineer

Get in touch by emailing shrey.kavi@gmail.com
Or visit shreykavi.com to learn more about me

Technical Skills

Backend:

C/C++	Bash
Python	ROS
Flask	Redis
Node.js	Docker
MongoDB	YOLO
PostgreSQL	OAuth 2.0
DynamoDB	WebSocket

Frontend:

React	npm
Vue.js	Webpack
Typescript	GatsbyJS
Javascript	HTML5
JQuery	CSS3/ SASS

Hardware:

MATLAB	SPI
Arduino	I2C
Raspberry Pi	UART
ESP8266	GPIO
Logic Analyzer	JTAG
ARM Assembly	

Education

BASc Computer Engineering

University of Waterloo
2015 – 2020

Relevant Courses:

Computer Security

Operating Systems

Adaptive Algorithms

Distributed Computing

Programming for Performance

Algorithms and Data Structures

Work Experience

Backend Engineering

Verkada in San Mateo, CA from Sep – Dec 2019

- Developed cross server services for features that interface client IoT devices
- Used historical camera captures to track paths of individuals walking on a floor plan
- Sharing feature grants external contacts with temporary access to secured content
- Test driven development with isolated unit tests and code reviews for daily releases
  [Python, Flask, PostgreSQL, DynamoDB, Redis, CircleCI, Twilio, pytest, AWS]

Software Developer

Clearpath Robotics Inc. in Kitchener, ON from Sep – Dec 2018

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

Hardware Firmware Developer

Miovision Technologies in Kitchener, ON from Jan – Apr 2018

- Programmed microcontroller firmware to interface and control testing hardware
- Created application to gather, organize and display test data from multiple servers
- Enhanced existing device's firmware performance with new features
  [Code Composer Studio, Tiva microcontroller, C++, Python, Linux, SPI]

Web Developer

RBC Global Asset Management in Toronto, ON from Jun – Sep 2017

- Full-stack developer for applications used by thousands of advisors
- Created internal tools using React to replace costly third-party solutions
- Pushed full applications to production and patched critical bugs
  [React, JQuery, Laravel, SQL, Git, Bash, JavaScript, ES6, HTML5, CSS3]

Projects

Audio Video AI (Jan 2020 - Present)
Standalone desktop application which makes video editing more time efficient
by automating the post-production workflow using OpenCV and machine learning

Sense IoT (Jan - Apr 2020)
Teaches kids the principles of IoT development using an interactive webpage
including an onsite compiler which communicates with external hardware toys

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