

Riju Sikdar

4569 Metcalfe Ave., Mississauga ON

☎ 647-573-8171 | ✉ rijusikdar@gmail.com | 🏠 rr9.github.io | 🌐 rr9 | in rijusikdar

Skills

Software C · Python · Java · Bash | JavaScript · PHP · SQL & NoSQL · HTML & CSS | MATLAB
Hardware FreeRTOS · Ti-RTOS · MIPS Assembly · Embedded C · VHDL · LabVIEW
Technologies Agile · Git · CAD (SolidWorks, Fusion360) · Illustrator · Photoshop · 3D Printing

Work Experience

ZTR Control Systems · C · Python (OpenCV, Pandas) · Ti-RTOS · Keras · IoT Waterloo, ON

R&D Developer

May. 2020 - Dec. 2020

- Created embedded C Bluetooth beacon data packet collection algorithm on Ti and Nordic microcontrollers
- Trained and implemented EfficientNet transfer learning AI image classification model in Keras
- Designed scalable multi-threaded data processing algorithm with dynamic memory management
- Implemented facial detection & recognition using OpenCV and Caffe AI model

Evertz Microsystems · Python (Twisted) · Bash · JavaScript Burlington, ON

Student Embedded Systems Design Student

Jan. 2019 - Aug. 2019

- Implemented features on real time Closed Captioning server backend using asynchronous Python frameworks
- Developed webserver from scratch to handle Web-RTC media streams with redundancy and load balancing
- Refactored codebase for 20% reduction in asynchronous function calls
- Created automated system wide stress testing and manual integration testing

Sheridan College · Java (EE, FX) · PHP · JavaScript · C · Python Oakville, ON

Java Learning Assistant

May. 2018 - Aug. 2018

- Assisted students learning algorithms and data structures in several languages
- Diagnosed numerous errors and helped refactor students' code for increased efficiency
- Organized and facilitated students at exam review sessions and group study sessions
- Learned Java FX & JavaEE (for server development) to help additional students

Projects

Bluetooth (BLE) Indoor Navigation System · Python(Flask) · JavaScript · HTML · CSS · SPI University of Guelph

Bioinstrumentation Design Capstone

- Created BLE beacon based real-time indoor navigation system to help patients navigate large hospitals
- Implemented localization, smoothing and pathfinding algorithms for navigation
- Developed a Flask web server and scripts for localization and rendering graphics on SPI LCD display
- Provided user with live graphical feedback on a portable Raspberry Pi with 3D printed display mount

OpenSaysMe - IOT Garage Opener · C · HTML · CSS · IoT 🔗 Git Repo

Personal Project

- Created a Wi-Fi based IOT garage door opener retrofit using ESP8266 microcontroller and a rotary encoder
- Implemented REST API endpoints in C to access from webpage or Android app

More Projects · C · FreeRTOS · Go · HTML · CSS · Flask · JS · Arduino · OpenCV 🌐 Webpage

Education

University of Guelph Guelph, Ontario

B.Eng in Engineering Systems and Computing

Sep. 2016 - Apr. 2021