Riju Sikdar

📞 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 (SolidWords, 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 EffitientNet transfer learning AI image classification model in Keras
- Designed scalable multi-threaded data processing algorithm with dynamic memory management
- Implimented facial detection & recognition using OpenCV and Caffe AI model

Evertz Microsystems · Python (Twsited) · 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*