Sagar Mandal

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# Experiences

## Software Engineer | Varian Medical Systems | Jul 18 – Present

Work on the Velocity Imaging Informatics System. My role involves:

* Working on algorithms to calculate-estimate radiation doses.
* Working on developing and deploying cloud-based imaging services for hospitals/ researchers.
* Working on visual and backend components of the informatics software.
* Developing Image Processing algorithms.

Skills: C++ 14, QT, DICOM, SQL, AWS Services, Docker, Kubernetes, ITK

## Software Engineering Intern | Intuitive Surgical | May 17 – Aug 17

Worked on the Camera Division of da Vinci Surgical System

* Developed software aides to assist in camera prototype bring-up, design verification and validation.
* Tested camera image quality and optical designs by writing scripts.

Skills: Python, C++, Socket.io, JavaScript, HTML, CSS

## Software Engineering Intern | NextAngles | May 16 – Aug 16

* Designed and developed components of a full stack web application.
* Set up and maintained Jenkins server and dependency repository.

### Skills: Java, JavaScript, HTML, CSS, jQuery

# Research and Projects

## Vision Team Lead | VIP: Aquabots | Aug 17 – May 18

* Project focused on robot which detects and collects sea anemone samples underwater.
* Led a team of four on developing an Object detection algorithm which works 24fps on a low powered processor. Integrated the algorithm to work with robotic arm.

### Skills: Python, Tensorflow, Embedded Systems, OpenCV

## Technical Lead | Senior Design Team | Aug 17 – May 18

* Designed and implemented an Recycle Bin which sorts trash to separate bin using object detection.
* Developed and Optimized a classification model for a Raspberry Pi3 which classifies trash with 87% accuracy in 1.3s (developed a shallow neural network to speed up time).
* Utilized adaptive learning to make the classifier improve overtime.

Skills: Python, Tensorflow, Pi3, IoT, Deep Learning

# Skills

**Languages**: C++**,** Python**,** Java**,** JavaScript, Golang**,** MATLAB**,** HTML/ CSS**,** Assembly, SQL

**Software/ Frameworks**: TensorFlow, Flask, OpenCV, QT, AWS Core Services, Docker, Kubernetes

**Instrumentation**: Logic Analyzer, Oscilloscope, FPGA, Microcontrollers, Optical Fiber Splicing

**Languages**: English, Bengali

# Education

## Georgia institute of technology

### Bachelor’s | 2014 – 2018 | Computer Engineering | 3.25 GPA

Graduated with Honors