Prangon Ghose

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Education

Stony Brook University

Stony Brook, NY

Bachelor of Engineering (B.E.), Computer Engineering — *August, 2017 - PRESENT*

- **Anticipated Graduation:** May, 2021
- **GPA:** 3.7/4.0
- **Organization(s):** IEEE-Eta Kappa Nu Honors Society – Theta Mu Chapter, Science and Technology Entry Program (Instructor)
- **Honors/Awards:** Dean's List (All Semesters), Presidential Scholarship, CEAS Dean's Scholarship
- **Relevant Coursework:** C/C++ Programming, Java and Object-oriented Programming, Data Structures, Embedded Microprocessor Systems Design, Digital Design using VHDL and PLDs, Computer Architecture, Modern PCB Design

Stuyvesant High School

New York, NY

Advanced Regents Diploma with Honors — *September, 2013 - June, 2017*

Skills

Programming Languages Python, C++, C, Java, Assembly, HTML, CSS
Software Git, SQL, UNIX/Linux
Hardware VHDL, Autodesk EAGLE

Professional Experience

IAB Technology Laboratory

New York, NY

Product Development Intern — *June, 2018 - August, 2018*

- **Reviewed** technical product documentation regarding data protection and privacy to create understandable instructions and standards for the digital advertising industry
- **Modernized** the organization's online presence by implementing search engine optimization (SEO) across its Wordpress site through the use of Google Analytics and SEO plugins

Leadership Experience

Stony Brook Robotics Team

Stony Brook, NY

President, Project Manager, Software Team Lead — *May, 2018 - PRESENT*

- **Expanded** active member participation by 150% and recruited over 20 students across three engineering teams to revitalize competition-based project development
- **Streamlined** the team structure and communication system, accelerating each project's road-map by 20% and increasing member productivity by 10%
- **Partnered** with five on-campus and off-campus organizations to acquire over $4000 to support the team's long-term growth

Projects

AutoCar

A 10:1 ratio autonomous ground vehicle, built with **Python** and **C++**

- **Developed** a message-passing API in Python to transmit and receive NumPy arrays, JSON objects, and other fundamental data types using the ZeroMQ framework and the publisher-subscriber pattern to communicate in between various subsystems
- **Integrated** the hardware and software systems by using the Inter-Integrated Circuit (I2C) protocol to communicate between a Jetson TX2 Embedded Computing Module and peripheral boards, reducing hardware costs by 50%

Motion-detecting Sign

A customizable LED sign with motion detection, designed in **EAGLE** and developed in **C**

- **Designed** a two-layer printed-circuit board in Autodesk EAGLE with an on-board, re-programmable STM32L0 low-power micro-controller and a USB-based power system, streamlining the circuit and reducing hardware costs
- **Implemented** a C program on the on-board STM32L0 micro-controller to control an array of LEDs using motion sensor data

Pipelined SIMD Multimedia Unit

A four-stage pipelined multimedia unit, designed in **VHDL**

- **Built** a four-stage pipelined multimedia unit in VHDL, accompanied by an assembler in Python, to operate on three data inputs, with optimizing strategies, such as data forwarding, implemented to increase processing speed