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

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**, **C++**, AND **C**

- **Developed** a message-passing API in C to transmit and receive continuous data streams using the ZeroMQ framework and the Transmission Control Protocol (TCP), allowing for long-distance data transfer between the vehicle and the base station
- **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