1-(646)-804-8904

JOHN ARENA

jarena000@citymail.cuny.edu
linkedin.com/in/john-arena

EDUCATION

New York, NY **The City College of New York** **Feb 2015 - May 2020**

- B.E. in Computer Engineering, May 2020. GPA: 3.056
- Undergraduate Courses: Comp. Architecture, Algorithms, Soft. Design Lab, Software Engineering, EE Labs

Languages and Technologies

- C++, Java, Python, x86, C, HTML, CSS, VHDL
- Git, Visual Studio, VS Code, MATLAB, Quartus, KiCAD, AutoCAD

TECHNICAL EXPERIENCE

Projects

- **Smart eBike Kit (Senior Capstone) – Team Leader** (Fall 2019-Spring 2020).
  - A conversion kit which converts a mountain bike into an eBike w/ object detection & a smartphone app.
  - Organized weekly team meetings for designs, papers, presentations, etc. Delegated tasks.
  - Designed PCBs for eBrake/speedometer sensors, turn signals & current divider for the DC/DC converter.
  - Designed 3D housings for eBrake and speedometer sensors.
  - Created backend code for app setup on Raspberry Pi and for the speedometers and turn signal sensors.
  - Setup the smartphone app and created GUI.
  - Motor design/placement and simulations of motor performance.
  - Testing of 18650 Li-Ion cells for battery pack for the eBike.
- **32-bit CPU** (Spring 2019).
  - 32-bit CPU implemented using VHDL in Quartus.
  - Designed and implemented Register, Instruction Memory, ALU, Alu Control, Data Memory, Control Unit.
  - Implemented LOADI, ORI, ADD, SUB, AND, OR, STL, SW, LW.
  - Implemented onto FPGA board. Designed to take 32-bit instructions with switches.
- **MEEP** (Fall 2018).
  - Group project creating a mimic google docs using Python, Flask and ReactJS.
  - Worked on the front end using MaterializeCSS. Rated as best user interface designed in the class.
- **Personal Website** (Winter 2018-Present).
  - Using HTML/CSS/JS to develop website. Using CSS Materialize to design/expedite UI.
- **Digital Clock** (Summer 2017).
  - 12-hour clock built with digital ICs. Schematics created in MultiSIM, then applied to protoboard.
  - Designed to use a 9V input. Created a working time base generator for clock signal.
- **Text Editor** (Fall 2017).
  - Created a text editor using ASM with GUI based on notepad.
  - Implemented: Open, read, save & close file. Insert and Overtype Mode. Font Color. Encrypt/Decrypt.

EMPLOYMENT

IT **RFCUNY-PS1 Bergen** **Jan 2020-Sept 2020**

- Resolved 71 existing problems within 5 weeks of starting.
- Reduced response time of issues from within a week to within 24-36 hours.
- Cleaned out and organized tech storage closet. Created labeling system for organization.

Tutor **Varsity Tutors** **April 2018-Current**

- Tutoring various subjects through Varsity Tutors with an average score of 5/5 by clients.
- Have brought students a grade level up after tutoring completed.

ADDITIONAL EXPERIENCE AND AWARDS

- **Presidential Scholarship, New York Institute of Technology:** $16,000 scholarship award.

LANGUAGES

- **German:** (A1 Level).