

MUSHFIQ MAHMUD

MUSHFIQ@MAIL.USF.EDU | LINKEDIN.COM/IN/MUSHFIQ-MAHMUD/ | WEBSITE: MUSHFIQMAHMUD.COM
HIGHLAND, CA | (813) 570-1426

SUMMARY

Recently graduated Electrical Engineer, quick learner & efficient problem solver who is passionate about innovative technologies.

EDUCATION

Bachelors of Science in Electrical Engineering (Honors College)

May 2017

University of South Florida (USF) | Tampa, FL

GPA: 3.62

USF Green & Gold Presidential Award, USF Honors Scholarship, Phi Kappa Phi Honors Society Member.

Coursework: Embedded Systems, System on a Chip, Microprocessor Architecture, Signal Analysis, Microelectronics, Communication Systems.

SKILLS

- **Software:** C++, C, Java, Python, Assembly, PLC software, Verilog, MATLAB + Simulink, SolidWorks, LabVIEW, LTSpice.
 - **Hardware:** IoT Programming, Microchip PIC, Arduino, ARM: Particle Photon, Freescale KL25Z, Kinetis, OpAmp ICs.
 - **Technical:** Soldering & Circuit Assembly, PCB Design, Logic Circuits, 3D printing, Oscilloscope, Spectrum Analyzer.
-

PROJECTS

Senior Design – RoboPainter Team Leader (Held 3rd Place out of 8 teams)

- Automated microcontroller interior wall painting robot prototype – in charge of programming & 3D printing design.
- Made use of C/C++, interrupts & timing programming, DC motor control circuits, solenoid spray valves.
- Successfully completed prototype with testing and design requirements met.

Honors Engineering Thesis – Engineering Sustainability for On-Campus Food Waste

- Team of 4 designed mobile application to record survey data for dining halls to improve communication & reduce food waste.
- Used MongoDB (JSON based) for database management, Angular & Ionic for web app development.

Stove Safety Monitor System

- Designed Timing circuit controlled by laser & temperature sensors built using discrete logic.
- Made use of assembly code, Embedded C++, ADC, interrupts, USB, I2C Master & Slave communication & LCD output.

Digital Chord Chart

- 3D printed remote controlled guitar fretboard model that can teach guitar chords & scales using LED matrix & LCD Panel.
- Made use of IR remote and receiver, LED Matrix pattern generation & interrupt service routines for sound generation.

Other Projects (Details on website)

- Personal Website (mushfiqmahmud.com): Learned web development for the purpose of self promotion.
 - Atari Punk Console: Monostable 555 coupled with adjustable 10 step sequencer for producing music.
-

PROFESSIONAL EXPERIENCE

Tutor – USF Holcombe Jenkins Honors Program | Tampa, FL

August 2016 – June 2017

- Tutor for EE: Circuits, Semiconductor Devices, Electronics.

Tutor – USF SMART LAB USF Tampa Library | Tampa, FL

August 2015 – June 2017

- Tutor for Calculus (I-III) & Physics (I, II). Helped improve the grades of over 500 students. Received very good rating overall.
 - CRLA Tutor Training Certification Level 1 & 2 including collaboration with professors & tutors on learning strategies.
-

ORGANIZATIONS

IEEE-Computer Society USF Chapter

March 2016 – November 2016

- Held position of Historian & Media Outreach Officer maintaining online presence & team collaboration.

American Water Works Association USF Chapter

January 2016 – May 2016

- Held position of Treasurer & helped with Event management & Budget Handling.