

ABRIAN I. ABIR

Previously known as. Mohammad A. Islam

Freshman at University of Tennessee

Major ≥ **Mechanical Engineering**

Minor ≥ **Computer Science**

CONTRIBUTION TO PAPERS >

Additive Manufacturing, Linking thermoset ink rheology to the stability of 3D-printed structures;
doi.org/10.1016/j.addma.2020.101621

EXPERIENCE >

University of Tennessee — Dr. Compton Research intern

Occasion: 2018 - 2020

- Solely developed machine vision application to automate the data collection, analysis, and visualization of direct ink-write 3D printing experiments /Python, OpenCV/ ([YouTube](#))
- Independently developed desktop application and tools to aid and standardize our research group's analysis and visualization of tensile test data /Python, Tkinter/ ([YouTube](#))
- Developed website and documentation for the research group

Soknorobo, South Doyle High School — Robotics Team Lead

Occasion: 2016 - 2020

- Managed and led a group of my peers to successfully design, build and code complex robotic subsystems [Code/GitHub](#) Robot/[CAD](#)
- Peer taught and developed the curriculum for SDHS Computer Science and Engineering/Robotics class
- Built, managed, and maintained the robotic team's website. Website/soknorobo.com [Code/GitHub](#)

PERSONAL PROJECTS >

Minibot Curriculum: Developed robotics library, documentation, and curriculum for SDHS Engineering Course. Docs/[Readthedocs](#), [Code/GitHub](#), Module/[PyPI](#)

Vision processing Workshop: Created and led a yearly robotics community machine vision tutorial and workshop. [Code/GitHub](#), Slides/[GoogleSlides](#)

RELEVANT COURSES >

- > MATH 241 – Multivariable Calculus; > EF 151 – Physics for Engineers;
- > COSC 102 – Intro to Comp. Science; > PHIL 101 – Intro to Philosophy;
- > UNHO101 – Honors FYS.

COMMUNITY SERVICE >

Completed numerous community service opportunities through the 1794 Scholars program and UT Lead.

Contact Info >

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[Github.com/a-abir](https://github.com/a-abir)

linkedin.com/in/a-abir

orcid.org/0000-0001-7257-1548

Skills >

Computer-Aided Design:

AutoCAD, Fusion 360

Computer-Aided Manufacturing

Operate CNC Mill, FDM 3d

Printers, CNC Laser Cutter

Programming: [Python](#), [C++](#),

[JavaScript](#)

Basic Front and Back End Web development

EXTRACURRICULARS >

1794 Scholars Program

UT Lead

FIRST Alumni

AWARDS >

> **ROBERT H. LEONARD Service to Humanity Award** presented by the Optimist Club of Knoxville

> **Captain Marcus Alford Memorial Award**

> **SGT Eric Andrew Fifer Memorial Award**

> **Superior Cadet** presented by SDHS JROTC

LANGUAGES >

English, Bengali, Spanish, Hindi

PAST COURSES >

MATH 141 – Calculus I, MATH

142 – Calculus II, PHYS 222 –

Elem. of Physics, ENGL 101 –

English Comp. I, ENGL 102 –

English Comp. II, POLS 101 –

US. Gov & Politics

SUPPLEMENTARY >

[Highschool Details](#)