

# Md.Tahsin Mostafiz

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🔍 Google Scholar • R<sup>6</sup> Researchgate

## Research Interests

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Machine Learning, Deep Learning, Computer Vision, Natural Language Processing

## Education

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**PhD Student**, *Electrical and Computer Engineering* Jan 2021-  
University of Florida, Gainesville, USA

**Bachelor of Science**, *Electrical and Electronic Engineering* Feb 2017  
Bangladesh University of Engineering and Technology (BUET)

## Honors and Awards

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Competition expert in [Kaggle](#) 2020

Discussion expert in [Kaggle](#) 2020

Second Runner-up, Inter-University Project Show 2015, IEEE BUET Student Branch 2015

5<sup>th</sup> position, Web Design Contest 2015, BUET 2015

Divisional Champion, 1<sup>st</sup> Runner-up, 2<sup>nd</sup> Runner-up, Bangladesh Mathematical Olympiad 2006-2008

## Work Experience

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Graduate Research Assistant, [FICS Lab](#), University of Florida Jan 2021

Machine Learning Engineer, [AI Samurai Japan Limited](#), Dhaka Dec 2019- Dec 2020

Research Assistant, [mHealth Laboratory](#), BME Department, BUET Oct. 2019- December 2019

Professional Member, Humanitarian Activity Committee, IEEE Bangladesh Section June 2019-

Machine Learning Researcher, [Semion Limited](#), Dhaka, Bangladesh March 2017- May 2019

Intern, Semion Limited, Dhaka, Bangladesh August 2016- March 2017

Writer and Editor, Zero2Infinity, A Monthly Science Magazine June 2013- August 2015

Member, IEEE BUET Student Branch June 2015- Feb 2017

## Research Articles

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- o "Pathology Extraction from Chest X-Ray Radiological Reports: A Performance Comparison" **Tahsin Mostafiz**, Dr. Khalid Ashraf *arXiv 1812.02305*
- o "Retinal Blood Vessel Segmentation using Residual Block Incorporated U-Net Architecture and Fuzzy Inference System" **Tahsin Mostafiz**, Ismat Jarin, Dr. Shaikh A. Fattah and Dr. Celia Shahnaz; *IEEE WIECON-ECE 2018*.
- o "Photoplay: An Android Application to Stimulate Children's Cognitive Development" Avijit Mitra, **Tahsin Mostafiz**, Raihan Ur Rashid; Humanitarian Technology Conference (R10-HTC), 2017 IEEE Region 10, Dhaka.

## Technical Skills

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**Programming Languages:** C, C++, MATLAB, JAVA, Assembly,  $\LaTeX$ , Python

**Python Frameworks:** OpenCV, BeautifulSoup, Pandas, Numpy

**Machine Learning Frameworks:** Scikit-Learn, Tensorflow, Keras, PyTorch, Fast.ai

**Hardware Design Tool:** MATLAB, Proteus, Quartus, PSpice

**Integrated Development Environment :** PyCharm, Android Studio, IntelliJ IDEA, Visual Studio, Arduino

**Hardware:** Arduino, Raspberry Pi, AVR Microcontrollers

## Professional Projects

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- Co-development of semi-supervised CNN model for abnormality detection in chest images.
- Backend deep learning algorithm development of **RadAssist**, a web application for the detection and localization of *Intracranial Hemorrhage* from brain CT images.
- **SemRad**, a Teleradiology Solution: Development of An Inference Tool and a Class Activation Mapping (CAM) Tool Using *ResNet101* for Detection and Localization of Abnormalities in Chest X-ray Images for this software.
- **semDDX**, an *Android app*: This Android app was designed to help the users navigate the vast landscape of differential diagnoses and help medical students to learn DD easily.
- **Risk Factors Detection**: Identification of Risk Factors for Heart Disease from *i2b2* dataset Using a Bidirectional LSTM network with 50 Dimensional Glove Word Embedding.
- **Differential Diagnoses**, an *Amazon Alexa skill*: This Alexa skill was designed to help the users find all differential diagnoses for a symptom.
- **Symptom Checker**, an *Amazon Alexa skill*: This skill was designed to help the users detect disease from symptoms.

## Other Projects

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- Mentored an undergraduate student in his thesis work titled "*COVID Infection Analysis via Lung Lobe Segmentation using Deep Learning*".
- Implementation of A Deep Domain Adaptation Method for *2018 Visual Domain Adaptation (VisDA) Challenge*.