

# Safia Fatima

safia.fatima@nu.edu.pk :: <https://safiafatima.github.io>  
<https://www.linkedin.com/in/safiafatima>

## EDUCATION

<b>AI for Medicine Specialization</b> Coursera	August 2020-To Date
<b>M.Sc. Computer Science</b> NUCES, Pakistan – GPA: 3.44/4.00	August 2016-January 2019
<b>B.Sc. Computer Science</b> NUCES, Pakistan – GPA: 3.15/4.00	August 2012-May 2016
<b>F.Sc. Computer Science</b> Pakistan – Marks: 892/1100	August 2010-May 2012

## PUBLICATIONS

<b>Evaluation of Multi-Modal MRI Images for Brain Tumor Segmentation</b> ( <a href="#">Published</a> )	February 2020
<ul style="list-style-type: none"><li>• <b>Conference:</b> ICET'19 The 15th International Conference on Emerging Technologies, Pakistan</li><li>• <b>Presentation Schedule:</b> Peshawar, Pakistan, December 3rd, 2019</li></ul>	

## TECHINICAL SKILLS

**Programming Languages:** JAVA, C++/C, Python, JavaScript, Bash  
**Machine Learning:** Supervised/Unsupervised Learning, Generative Models, Deep Learning, Natural Language Processing  
**Analytics:** Jupyter, SQL, Excel  
**Tools/Libraries:** PyTorch, OpenCV, Tensorflow, Keras, Sklearn, Git, CUDA, Flask

## SUPERVISION OF UNDERGRAD PROJECTS

<b>DeepFake Video Detection</b> (In Progress)	September 2020-To Date
<b>Stock Market Data Analysis and Prediction using Time Series</b> (In Progress)	September 2020-To Date

## RESEARCH PROJECTS

<b>UNet-Cap: Segmentation and Localization of Glioblastomas Using Capsules and U-Net</b> (In Progress)	July 2020-To Date
<b>Evaluation of Multi-Modal Brain MRI Images for the Localization of Glioblastomas 1</b> (MScs Thesis)	January 2018-January 2019
<ul style="list-style-type: none"><li>• A method that incorporates a deep learning-based model U-Net to address brain tumor localization.</li><li>• Utilizing BRATS2015 as the primary dataset for Brain MRI Images.</li><li>• Using the same architecture for the evaluation of individual modalities.</li></ul>	

## WORK EXPERIENCE

<b>FAST-NUCES, Peshawar</b> – Lecturer	August 2020-To Date
<ul style="list-style-type: none"><li>• Promoted under Computer Science Department as a Lecturer.</li><li>• Teaching courses including software design &amp; analysis and object-oriented programming</li><li>• Supervising CS undergraduate projects in the fields of computer vision, deep learning, and time series analysis.</li></ul>	
<b>FAST-NUCES, Peshawar</b> – Lab Instructor	January 2018–July 2020
<ul style="list-style-type: none"><li>• Worked under Computer Science Department as a Lab Instructor.</li><li>• Involved in teaching courses including Introduction to Computing, Databases, and Digital Logic Design.</li><li>• Gained skills in SQL, Python, and C++ programming languages.</li></ul>	

## KEY PROJECTS

<b>Bron Kerbosch Algorithm</b> ( <a href="#">Github</a> )	December 2017
<ul style="list-style-type: none"><li>• Code for implementing the BK algorithm to show all maximal cliques and one maximum clique from within set of maximal cliques.</li><li>• Implemented in C language using Graph Theory concepts.</li></ul>	
<b>Gene Ontology Classification of Protein Sequence Using Fully Connected Neural Networks</b> ( <a href="#">GitHub</a> )	January 2018
<ul style="list-style-type: none"><li>• Annotation of protein sequences with gene ontology (GO) classes using deep neural networks.</li><li>• Experimented on yeast dataset using python and Tensorflow.</li></ul>	
<b>Data Dissemination for Bioinformatics: An Agent Migration Approach (FYP-BSCS)</b>	May 2016
<ul style="list-style-type: none"><li>• An agent migration approach to fill in the retrieving remote data in a low-quality network environment, especially unstable mobile computing environments and do the client-side computation on the server end.</li><li>• User will be able to see his/her activity graphically visualized logs and statistics on their smartphone screen.</li><li>• The proposed approach can also overcome the resource limitation of mobile terminals and release mobile users from keeping online persistently.</li></ul>	

## KEY ACHIEVEMENTS & AWARDS

<b>Faculty Head ACM-Student Chapter</b> - NUCES, Pakistan	January 2020-To Date
<b>Learning to Teach Online Certification</b> – Coursera	July 2020-August 2020
<b>2x Bronze Medal</b> - NUCES, Pakistan	August 2012-May 2016
<b>Dean's List Certification Holder</b> - NUCES, Pakistan	August 2012-May 2016
<b>Vice-chairperson and International Member of ACM Student Chapter</b> - NUCES, Pakistan	August 2014-May 2016