# Akshat Agrawal

`#include "Engineer/Software"`

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## WORK EXPERIENCE

### MathWorks, Bangalore — C++ Software Developer

FEBRUARY 2020 - PRESENT

➔ **GLIM ASYNC Workflow Enhancement:** Owned and Enhanced MathWorks Infrastructure of Messaging to support async workflows with return values. GLIM is the inter-threading messaging infrastructure used under the hood of the entire line of MathWorks Products.
➔ **GLIM Componentization and Qt Re-architecture:** Did a major re-architecture of GLIM.
➔ **A lot of bug-fixing:** As a part of the core MATLAB and Simulink team, we work almost half of our time solving complex bugs in both legacy code and new features, since our team handles a lot of underlying architecture on top of which the entire line of MATLAB and Simulink tools are built.

### MathWorks, Bangalore — *Engineer at EDG*

JUNE 2019 - FEBRUARY 2020

➔ Created Variable Groups functionality for Variant Configuration Analyzer of the Variant Manager tool in Simulink.
➔ Collaborated with customers and also gave a workshop as a part of the EDG to solve their various product related queries.

### Centre for Cyber Security, IIT Kanpur — *Summer Research Intern*

MAY 2017 - JULY 2017

➔ Under the guidance of IITK CSE HoD, Prof. Sandeep Shukla.
➔ Created a Live Threat Intelligence Dashboard using ELK Stack to analyze and track real time Cyber Threats prevailing worldwide.
➔ Created Malicious URL Detection System using Machine Learning.
➔ Created a threat intelligence REST API to aggregate the intel from multiple online sources.

### HirePro, Bangalore — *Summer Intern*

MAY 2016 - JUNE 2016

➔ Created a Resume Parsing System to extract relevant information like skills, work experience and education details from resumes of thousands of candidates.

## EDUCATION

**Indian Institute of Information Technology, Allahabad.**

B.Tech-M.Tech 5-Year Dual Degree: 8.26 CGPA (2014-2019)

**Little Angels High School, Gwalior. (CBSE)**

Class XII: 95% (2013-2014)

Class X: 8.8 CGPA (2011-2012)

## SKILLS

**Programming Languages:** C++, Python, JavaScript, HTML, CSS, MATLAB.

**Libraries & Frameworks:** ReactJS, Django, Scikit-Learn, NumPy, Pandas, Elasticsearch, Logstash, Kibana, Qt/C++.

**Concepts Used:** Observer Pattern, Strategy Pattern, Facade Pattern, Multi-Threaded Queuing Systems, Data Structures, Algorithms, Object Oriented Concepts, Debugging Skills.

## ACHIEVEMENTS

**TEDx Speaker**

Gave a **TEDx Talk** on Artificial Intelligence, in October 2019 at TEDxYouth@LAHSGwalior

**Recognition at IIT Kanpur**

My Threat Intelligence Dashboard was featured on the homepage of the website of Cyber Security Center, IIT Kanpur.

**Research Thesis,** IIIT Allahabad

*Machine Learning in Stock Market*

MAY 2018 - MAY 2019

Created a Stock Screening and Prediction Software by combining the principles of Technical Analysis and Machine Learning, under the guidance of Dr. Pawan Chakraborty.

## PROJECTS

### funprojects.in

August 2020

➔ This is a simple and fun website I made, to make your day. Do visit it if you want to get inspired, laugh off a silly joke, or play the old-school snake game. :)

### Face Recognition and Verification System

FEBRUARY 2017

➔ The main aim was to build a face recognition system that tags the face of the person recognized in the trained database, or gives an "unknown" tag to the person it does not recognize.
➔ The major aspects of it were dataset creation, data preprocessing, and object recognition and verification.
➔ We used Python-OpenCV for data preprocessing, Principal Component Analysis (PCA) for dimensionality reduction and Artificial Neural Network (ANN) for image classification.

**Vice-Chair and Best Delegate Awards** at multiple Model United Nations Conferences.

## INTERESTS

- Full-Stack Development.
- Design Patterns.
- Writing modular code.

## PERSONAL SKILLS

- Ability to build end-to-end products.
- Effective Communication Skills.
- Experience with Customer Interaction.
- Ability to work well within a team.
- Have a knack for new tech stacks & technologies.

## HOBBIES

Photography, Travelling, Coding, Socializing, Pool/Snooker.