

Asif Iqbal Rahaman

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EDUCATION

- **Virginia Polytechnic Institute and State University (Virginia Tech)** Blacksburg, US
Masters in Engineering - Computer Science (minor - Data Analysis & AI); CGPA: 3.85/4 Aug 2022 - May 2024 (Exp.)
Courses: Information Security, AI for Software Development, Data Analysis, Machine Learning, NLP, Computer Vision
- **Vellore Institute of Technology** Vellore, India
Bachelor of Technology - Computer Science (minor - Bioinformatics); CGPA: 7.92/10 July 2015 - June 2019
Courses: Data Structure & Algorithms, AI, ML, DBMS, OS, Analytical Bioinformatics, Software Development, Deep Learning

SKILLS SUMMARY

- **Programming:** Python, SQL, Rust, C++, Bash, JavaScript
- **Frameworks:** Flask, FastAPI, win32, pandas, numpy, AWS-CDK, scikit, matplotlib, seaborn, pillow, pyautogui, pytorch, opencv
- **Tools:** Git, Jenkins, Subversion, MySQL, SQLite, MongoDB, DynamoDb, Docker, Parquet, RestAPI, Nginx, Supervisor
- **Platforms:** Mac, Windows, Amazon Web Services (AWS), Linux, Web, Arduino, Heroku

EXPERIENCE

- **Virginia Tech - Department of Computational Cell Biology** Blacksburg, US
Student Data Analyst Oct 2022 - Present
 - **Initial Idea:** Simulate cell cycle for boolean model of cancerous cells and identify nodes that improve or hinder their growth.
 - **Cell Cycle Interaction Model:** Currently we analyse interaction data of all perturbations of the model, validate them from database (wherever applicable), and simulate them in parallel to identify the nodes that improve the performance.
 - **Preprint:** Current manuscript available at [biorxiv.org/content/10.1101/2023.10.30.564745v1](https://www.biorxiv.org/content/10.1101/2023.10.30.564745v1)
- **Seclore Technology Pvt Ltd** Mumbai, India
Product Engineer Dec 2021 - Jul 2022
 - **Cloud automation:** Developed DevOps automation that was able to deploy complete product for a client in less than an hour in a fully managed and scalable AWS architecture. This decreased customer onboarding time from several days to few hours.
 - **Customer Infra Stack Codification:** Implemented individual customer infrastructure as a AWS Cloudformation stack via aws-cdk and pynamodb modules in Python.
 - **Collaboration:** Team of 3 worked with Subversion in an agile environment to develop the cloud automation.
- **Ericsson Global India Pvt Ltd** Bangalore, India
Software Developer Jan 2019 - Jul 2021
 - **Surface Automation Framework:** Developed custom RPA framework that helped automate various network management tools by identifying elements and performing actions on screen. Automation gain with RPA framework reached 35% per month.
 - **Rule-based Data Analysis Engine:** Implemented a rule-based recommendation and data analysis engine that finds high-impact network cells for telcos. The data analysis engine worked on large network data (10M rows and 5K cols, approx 30GB parquet file daily) regularly for about 20 clients in less than 4 hours with parallel processing.
 - **Impact:** With the recommendation & RCA system automation gain reached 36% per month, and with RPA framework automation gain was more than 35%. Here automation gain can be defined as reduced human effort by using automation framework.
 - **Other projects:** Integrated the custom RPA framework with existing automation platform, BotStore. Also developed a system to fetch large amount of network data from datalake to local system via API, cleaned them and stored them as parquet files.

PROJECTS

- **Personal Website with FastAPI:** Developed my personal website (asifiqbal.xyz) with FastAPI while learning the new technology, and hosted it in AWS with Nginx proxy server and Supervisor.
- **EEG-to-Text with Relation Extraction:** Converting EEG encoding and eye-tracking to text and extract relationships between them using Multi-Layer Transformer Encoder and single layer feed-forward networks.

CERTIFICATIONS

Python for Data Science and Machine Learning Bootcamp, Neural Networks and Deep Learning, Improving Deep Neural Network: Hyperparameter Tuning, Regularization and Optimization

HONORS AND AWARDS

- **Galactic Award, Ericsson Global India Pvt Ltd (bi-annual award, 2020):** For contribution to achieve outstanding business excellence with data automation framework (Reduced 35% man-hours with the data automation).

INTERESTS

- **Work:** Automation, Cloud Technologies, Data Analysis, Intelligent Web and Software Development
- **Research:** Artificial Intelligence, Natural Language Processing, Machine Learning in real-world scenarios
- **Reading:** Technology related blogs; Recent developments in Python, Rust and other languages and frameworks
- **Other:** Photography, Soccer, Table Tennis, Fiction and Non-fiction novels