

# ASIF IQBAL RAHAMAN

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📍 Blacksburg, VA, USA  
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Computer Science Graduate student with 3+ years of experience in Software Development industry and a year of experience in building software for academic research, looking for full-time opportunity starting June, 2024.

## SKILLS

**Programming:** Python, Rust, Javascript, SQL, Bash, HTML, CSS, C++, Java, VueJS  
**Frameworks:** Flask, FastAPI, RestAPI, Pandas, Numpy, AWS-CDK, PyTorch, PyautoGUI, Seaborn, OpenCV  
**Tools:** Git, Jenkins, Docker, Unix, Nginx, Supervisor, MySQL, MongoDB, Amazon Web Services (AWS)

## EDUCATION

**VIRGINIA TECH – BLACKSBURG, US**

**Master of Engineering in Computer Science**

**Aug 2022 – May 2024 (Exp)**

- **Courses:** AI Tools for Software Delivery, Info Security, Natural Language Processing, Data Analysis, Applications of ML

**VIT UNIVERSITY – VELLORE, IN**

**Bachelor of Technology in Computer Science**

**Aug 2015 – Jun 2019**

- **Courses:** Data Structure & Algorithms, Operating System, Software Development, Deep Learning, Internet of Things

## EXPERIENCE

**DEPARTMENT OF COMPUTATIONAL CELL BIOLOGY, VIRGINIA TECH – BLACKSBURG, US**

**Software Developer**

**Oct 2022 - Present**

- Designed an automated simulation of cell cycle with boolean model of protein interactions in mammalian and yeast cells.
- Achieved nearly **5x faster** model perturbation analysis using parallel processing and algorithm optimization on the ARC@VT supercomputer for automated improvement of exponentially growing (approx 16M interactions) cell interaction models.
- Preprint of the research work is available at [biorxiv.org/content/10.1101/2023.10.30.564745v1](https://doi.org/10.1101/2023.10.30.564745v1)

**SECLORE TECHNOLOGIES PVT. LTD. – MUMBAI, IN**

**Product Engineer**

**Dec 2021 - Jul 2022**

- Developed DevOps automation with AWS-CDK that deployed the data security solution of Seclore on cloud for each client in few hours in a fully managed AWS architecture. This reduced customer onboarding time from **several days** to **few hours**.
- Implemented individual customer infrastructure as code that created AWS Cloudformation stack to manage individual clients.
- Worked with a team of 3 in agile principal to develop the initial draft of the framework within 4 months.

**ERICSSON INDIA GLOBAL SERVICES PVT. LTD. – BANGALORE, IN**

- Implemented rule-based recommendation engine to automate analysis of network cell performance for multiple telco clients.
- Constructed a system with APIs to automatically fetch data from datalakes to be used in the recommendation engine.
- Developed custom RPA Framework to automate network management tools by identifying elements and performing actions.
- Integrated this RPA framework with company's existing automation platform, BotStore using internal APIs.
- Achieved automation gain with recommendation engine about **36%** and with RPA framework about **35%**.

## PROJECTS

**Personal Website with FastAPI, AWS and Nginx**

**Jan 2024**

- Developed using FastAPI and Jinja2 template framework with Python. Also used JavaScript to detect and apply dark theme.
- Deployed the website in AWS instance and configured Nginx proxy server to route traffic from the URL [asifiqbal.xyz](https://asifiqbal.xyz).

**EEG Signal to Text Extraction**

**Nov 2023**

- Reproduced the research of Wang, Ji et al to convert EEG signal to text tokens by fine-tuning BART model with custom data.
- Implemented zero-shot algorithm in PyTorch to classify the generated texts for verifying sentiment analysis of EEG signals.

**Multiple Object Tracking using FairMOT and GAN**

**Dec 2023**

- Constructed a novel architecture for object tracking using FairMOT and GAN (Generative Adversarial Network).
- Demonstrated that using generator in a separate layer in the architecture makes the overall performance of tracking worse.

## CERTIFICATIONS & AWARDS

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

Udemy Certificate - May 2021

Coursera Certificate - Jul 2020

Coursera Certificate - Jan 2020

**Bi-annual Galactic Award from Ericsson (2020)** for achieving outstanding business excellence with automation framework.