Raian Latif Nabil

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EDUCATION

- **Bangladesh University of Engineering and Technology** — Dhaka, Bangladesh
  Bachelor of Science - Computer Science and Engineering; CGPA: 3.51/4.00 — *Feb 2016 - Feb 2021*
  Selected Courses: Compilers, Theory Of Computations, Database, , Software Engineering, Information System Design, Computer Networks, Operating Systems, Computer Security, Computer Graphics, Bioinformatics, Artificial Intelligence, Machine Laearning, Pattern Recognition
  Thesis: Different Approaches to Sequence Comparison Methods for Phylogenetic Tree Estimation.
  Supervisor: Dr. M Saifur Rahman.

- **Notre Dame College** — Dhaka, Bangladesh
  Higher Secondary School Certificate; GPA: 5.00/5.00 — *July 2013 - June 2015*

RESEARCH INTEREST

Software Engineering, Software Security, Programming Language

PROFESSIONAL EXPERIENCE

- **OpenRefactory, Inc. — Santa Clara, CA, USA**
  Software Engineer — *July 2021 - Present*
  Working on Intelligent Code Repair (iCR), which is a static analysis-based bug detection engine that (1) detects bugs that other tools miss, (2) does that with dramatically low false warnings, and (3) is the first and only tool in this space that can also synthesize fixes automatically for over half of all the bugs detected. I am currently working here remotely from Dhaka, Bangladesh. Key Responsibilities include.

  * contributing to the bug detection algorithm in various languages
  * packaging iCR products on different platforms
  * investigating and integrating new technologies, platforms, and SDKs

  Some of the major contributions include:

  * Bug detection algorithm for security vulnerabilities for Java and Python programs.
  * Design and implementation of different features of iCR Navigator and iCR Reviewer
  * Support for CI/CD integration with GitHub cloud, GitHub enterprise, GitLab cloud, GitLab enterprise, Bitbucket cloud and Bitbucket server.
  * Support for integrating license validation mechanism with iCR
  * Contributed to creating a Kubernetes-based deployment of iCR

RESEARCH EXPERIENCE AND PUBLICATIONS

- **CD-MAWS: An Alignment-free Phylogeny Estimation Method Using Cosine Distance on Minimal Absent Word Sets**:
  - **Authors**: Naser Anjum, **Raian Latif Nabil**, Rakibul Islam Rafi, Dr. Shamsuzzoha Bayzid, Dr M Saifur Rahman
  - **Status**: Accepted in 2021 IEEE/ACM Transactions on Computational Biology and Bioinformatics. (link)

- **B.Sc Thesis: Different Approaches to Sequence Comparison Methods for Phylogenetic Tree Estimation.**:
  - **Authors**: Naser Anjum, **Raian Latif Nabil**, Rakibul Islam Rafi, Dr M Saifur Rahman

SELECTED ACADEMIC AND PERSONAL PROJECTS

- **Bachelor Bari**: A web platform for the people who seek residences for a short period of time in a city(like air bnb type). Tech: Laravel, PHP, CSS, HTML, MySQL (September '19)
- **EBook Store**: A book sharing platform for all where all can buy or sell their books. Tech: Springboot, Java, HTML, MySQL. (December '19)
- **Sign Language Alphabet Recognition**: Using deep learning model, sign language alphabet is recognised. ASL Dataset was used here. Tech: Python, Keras, Tensorflow (Dec '20)
- **DHCP Starvation attack tool**: Build a tool for DHCP Starvation attack as a sessional project of Computer Security. Tech: Python, JavaScript (September '19)
- **Automated Water Irrigation System**: a gardening system using micro controller. . Tech: ATMega32, Moisture Sensor, C (July 18)

Honors and Awards

Achieved Bangladesh Education Board Scholarship for Higher Secondary School Certificate(2016-2020), Junior School Certificate (2011-2012) and Primary School Certificate (2008-2010)

Skills Summary

- ○ **Languages**: Java, JavaScript, TypeScript, Python, C, C++, Matlab, Shell, PHP
- ○ **Frameworks**: Node js, React, Springboot, Flask, Laravel, JavaFX, OpenGL
- ○ **DevOps**: Jenkins, Docker, Kubernetes, Github CI, Gitlab CI
- ○ **Libraries**: Keras, Tensorflow, Scikit Learn, Pytorch, Trax
- ○ **Clouds**: Amazon EC2, S3 Bucket, Azure, Linode
- ○ **Technical Writings**: LaTeX, Overleaf
- ○ **Database**: MySQL, SQLite, MongoDB
- ○ **Mischallenous**: Git, NS2, Eclipse JDT, IntelliJ Platform SDK

Extra Curricullar Activities

- Actively worked as an organizer of BUET CSE FEST 2019, 2020 and BUET CSE Picnic 2019
- Champion of Takla Contest(Language Decoding contest), BUET CSE FEST, 2019
- Freshmen Student Reception Program, CSE, BUET (2017)
- Member of Notre Dame Science Club, (2013-14), worked as a volunteer in science festivals in that timeline
- First Runner Up in IQ-Test Competition, Annual Science Festival and 23rd GKC at NDC, 2013