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SABIT AHMED
2nd March 1998,
Bangladesh

PROFESSIONAL SUMMARY

A recently graduated student of Computer Science and Engineering who has conducted researches on identifying different types of Post-Translational Modifications (PTM). Also Experienced Secretary with a demonstrated history of working in Nonprofit Organizations. About 2+ years of research experience in Machine Learning, Bioinformatics, Computational Proteomics, Protein Sequence Analysis, Feature Engineering, etc. Research interest includes Machine Learning, Data Science, and Artificial Intelligence. About 1 year of development experience in AI driven Musculoskeletal Health Management System.

ACADEMIC BACKGROUND

Bachelor of Science (B.Sc.) in Computer Science and Engineering, 2021

Institution: Rajshahi University of Engineering and Technology

Result: 3.49 out of 4.00 (Last 4 semesters)

PROFESSIONAL EXPERIENCE

Jr. AI Developer, MyMedicalHub Bangladesh LTD.

February 2021 - Present (8 months)

Key Responsibilities:

- Working simultaneously on researching and developing automated musculoskeletal health solutions.
- Built cross-platform real-time exercise tracking applications with React-Native framework and Tensorflow.js models.
- Developing cutting-edge AI applications with Swift and Xcode.

Research Candidate, Machine Learning Research Lab

August 2019 - Present (2 years 2 months)

Key Responsibilities:

- Pursuing researches on Computational Biology.

Member, IEEE

December 2019 - Present (1 year 10 months)

Key Responsibilities:

- Maintaining professional networking with the benefit of career resources and recognition.

Secretary (IT), RUET Career Forum

March 2018 - February 2021 (2 years 11 months)

Key Responsibilities:

- Publicized 3rd and 4th RCF Career Fair as coordinator.
- About 2+ years of experience in planning, fundraising, publicizing, etc.

PUBLICATIONS

Articles:

- Ahmed, Sabit, Afrida Rahman, Md. Al Mehedi Hasan, Md Khaled Ben Islam, Julia Rahman, and Shamim Ahmad. "predPhogly-Site: Predicting Phosphoglycerylation Sites by Incorporating Probabilistic Sequence-Coupling Information into PseAAC and Addressing Data Imbalance." Edited by Ozlem Keskin. PLOS ONE 16, no. 4 (April 1, 2021): e0249396. doi:10.1371/journal.pone.0249396.
  Journal Title: PLOS ONE (**Impact Factor: 3.24**)
  DOI: https://doi.org/10.1371/journal.pone.0249396
  Source-Code: https://github.com/Sabit-Ahmed/predPhogly-Site

- Ahmed, Sabit, Afrida Rahman, Md. Al Mehedi Hasan, Md Khaled Ben Islam, Julia Rahman, and Shamim Ahmad, "predML-Site: Predicting Multiple Lysine PTM Sites with Optimal Feature Representation and Data Imbalance Minimization," in IEEE/ACM Transactions on Computational Biology and Bioinformatics, doi: 10.1109/TCBB.2021.3114349.
  Journal Title: IEEE/ACM Transactions on Computational Biology and Bioinformatics (**Impact Factor: 3.015**)
  DOI: https://doi.org/10.1109/TCBB.2021.3114349

- Ahmed, Sabit, Afrida Rahman, Md. Al Mehedi Hasan, Shamim Ahmad, and Shovan, S. M. (2021). "Computational identification of multiple lysine PTM sites by analyzing the instance hardness and feature importance." Scientific reports, 11(1), 18882. https://doi.org/10.1038/s41598-021-98458-y.
  Journal Title: Scientific Reports - Nature (**Impact Factor: 5.133**)
  DOI: https://doi.org/10.1038/s41598-021-98458-y
  Source-Code: https://github.com/Sabit-Ahmed/iMul-kSite

- Rahman, Afrida, Sabit Ahmed, Md Al Mehedi Hasan, and Shamim Ahmad, and Abdollah Dehzangi. "Accurately Predicting Nitrosylated Tyrosine Sites Using probabilistic sequence information."

  Journal Title: Gene - Elsevier (**Impact Factor: 3.688**)

  Status: Under Revision

Conference:

- Rahman, Afrida, Sabit Ahmed, Julia Rahman, and Md Al Mehedi Hasan. "Prediction of Formylation Sites by Incorporating Sequence Coupling into General PseAAC." In *2020 IEEE Region 10 Symposium (TENSYMP)*, pp. 921-924. IEEE, 2020.

  Conference Title: IEEE Region 10 Symposium (TENSYMP) 2020

  DOI: http://dx.doi.org/10.1109/TENSYMP50017.2020.9230745

PROJECTS

Web-Based Projects:

1. **Vue-folio**

   Project Details: A basic portfolio website built with Vue.js. The concept 'Single Page Application' (SPA) was implemented while playing around with this progressive JavaScript framework.

   Timeline: October 2020.

   Language and Tools: Vue CLI, Vue Router, HTML, CSS, and Bootstrap.

   GitHub Repository: https://github.com/Sabit-Ahmed/Sabit-Ahmed.info

Cross-platform applications:

2. **EMMA - LPT**

   Project Details: Efficient Musculoskeletal Medical Assistant (EMMA) is a cross-platform application for aiding AI driven musculoskeletal solutions. This stack consists of demo repositories, such as deploying custom trained and converted models, face and pose detection models with bare React-Native applications. The demo application below has been successfully integrated with the official EMMA - LPT mobile app.

   Timeline: April 2021 – August 2021.

   Language and Tools: JavaScript, React-Native, PyTorch, Tensorflow.js.

   GitHub Repository: https://github.com/Sabit-Ahmed/React-Native-Projects

   Demo application: https://github.com/Sabit-Ahmed/React-Native-Projects/tree/main/rn9app

3. **Learn Therapist (Android and iOS)**

Project Details: Learn Therapist is a new integration project of EMMA - LPT. It is a virtual therapist which can guide patients for the correct movements of an exercise. This is an ongoing project.

Timeline: August 2021 – Present.

Language and Tools: Kotlin, Swift, Android Studio, Xcode.

Research Projects:

Project Name: Post-Translational Modifications

Project Details: This project aims to identify protein's post-translational modifications both individually and simultaneously with higher efficacy. We have developed three single label predictors such as Formyl_Pred, predPhogly-Site, and PredNitro which correspond to Formylation, Phosphoglycerylation, and Nitrotyrosine sites prediction separately, and two multi-label predictors, such as, predML-Site, and iMul-kSite for predicting Acetylation, Crotonylation, Methylation, Succinylation, and glutarylation sites simultaneously.

Timeline: August 2019 – Present.

Language and Tools: MATLAB, Python, Scikit-learn, Django, HTML, and CSS.

Web-servers:

- **predML-Site:** http://103.99.176.239/predML-Site

- **predPhogly-Site:** http://103.99.176.239/predPhogly-Site

- **iMul-kSite:** http://103.99.176.239/iMul-kSite

- **PredNitro:** http://103.99.176.239/PredNitro

- **ResearchGate:** https://www.researchgate.net/project/Post-translational-Modifications

CERTIFICATIONS

Issued by the University of Michigan on Coursera-

- Programming for Everybody (Getting Started with Python)
- Python Data Structures
- Building Web Applications in PHP

Issued by IEEE-

- Certificate of appreciation for a successful presentation on "Prediction of Formylation Sites by Incorporating Sequence Coupling into General PseAAC"

Others-

- Numerous certificates on various extra-curricular activities i.e. writing, sports, etc.

SKILLS

- Python, MATLAB, C++, PHP

- Django, Flask, SQLite, SQL, NoSQL(MongoDB), HTML, CSS, Vue.js, Docker Containerization

- Pandas, Numpy, Seaborn, Matplotlib, Plotly & Cufflinks

- Data Analysis, Feature Engineering, Model Development, Machine Learning, Basic statistics, Web Scraping, Image Processing

- Bioinformatics, Computational Proteomics, Protein Sequence Analysis, Multi-Label Metrics

- JavaScript, React Native, Tensorflow.js, PyTorch, tfjs-react-native, pose detection, face detection.

- Swift, Kotlin, Android Studio, Xcode.

VOLUNTEER EXPERIENCE

Campus Representative, YSI Bangladesh

April 2018 – April 2019 (1 year)

Key Responsibilities:

- Maintained different programs on entrepreneurship and innovation.
- Worked with YSI for solving the sustainable development goals (SDG) of United Nations.

Member, Bangladesh Science Society

February 2018 - Present (3 years 7 months)

Key Responsibilities:

- Completed online course on Professional Skill Development led by Bangladesh Science Society.
- Maintained good teamwork with team members during the course.

OTHER INFORMATION

Keen interest in Literature, History, Mythology, Geography, Artificial Intelligence, Quantum Computing, Theoretical Physics, Cosmology, Astronomy. Love to play football, cricket, and other games.

REFERENCES

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