

Ashraful Islam Rafi

Former Software Engineer at Bangla Search Engine (Pipilika)
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EDUCATION

- **LEADING UNIVERSITY** Sylhet, Bangladesh
B. Sc. in Computer Science and Engineering 2009 – 2013
 - **Thesis/Project Title:** System to Secure Web Authentication: using cache, cookie, and session

RESEARCH INTEREST

- Software Engineering, Programming Languages, Algorithms, High Performance Computing, Machine Learning, Information Retrieval, Data Science and Cybersecurity

EXPERIENCE

- **BANGLA SEARCH ENGINE (PIPILIKA)** Sylhet, Bangladesh
Software Engineer (Research and Development) Aug 2017 - Mar 2021
 - **Search Relevancy Improvement:** Improved keyword-based search relevancy by designing dynamic schema in Apache Solr supported by the calculative implementation of Solr's dismax query parser and query boosting.
 - **A2i Search Portal (<http://a2i.pipilika.com>):** Spend around six months to find out a generic approach to Crawl, Parse, and Index the unstructured data from over 40,000 websites and later on provided REST API using Spring Boot framework.
 - **Spellchecker Context Aware Library:** After month-long, thorough research into the project improved the file—Dictionary—loading time by 20 seconds
 - **Solr Analytic Library:** The development of this plug and play library required a lot of individual research which can provide domain wise time series data for any project build upon Apache Solr.
 - **Rich Document Parser Library:** Wrote generic parser using jsoup library to extract data from file types such as DOC, PDF, PPT, CSV, etc. Extracting Bangla Unicode data from PDF files was the biggest challenge of all and still under development.
- **SOUTHEAST UNIVERSITY** Dhaka, Bangladesh
Programmer Apr 2015 - Aug 2017
 - Served more than three months as In-Charge of the Information Technology (IT) department
 - Modify, correct, and improve the overall performance of the University Support System (USS)
 - Developed "Result Prediction Tool" and "Online Admission System" using PHP, MySQL, Ajax, jQuery, JavaScript, and Bootstrap3
 - Coordinated and Monitored vendor company on developing Human Resources Management System (HRMS) Software as per the Software Requirements Specification (SRS)
- **DURBAR SOFTWARE** Dhaka, Bangladesh
Senior Software Engineer Nov 2014 - Apr 2015
 - Developed the annual "Local Health Bulletin - 2015" report and "Photo Archiver System" for the Ministry of Health and Family Welfare, Bangladesh as a vendor company
 - Used Bootstrap Framework for cross-platform compatibility
- **IT LAB SOLUTIONS LTD.** Sylhet, Bangladesh
Software Developer(While Doing Undergraduate) Feb 2012 - Jun 2014
 - Designed and Developed customized web-based shop management software for different businesses
 - Involved in back-end coding to manage dynamic pages using the CodeIgnitor framework

TECHNICAL SKILLS

- **Languages:** Java, PHP, Python, C, C++, JavaScript, HTML5, CSS3
- **Databases:** MySql, Apache Solr, MongoDB
- **Frameworks/Libraries:** Spring Boot, Java Servlet, Jsoup, Scrapy, Codeigniter, jQuery, Bootstrap3
- **Web Technologies/Others:** Wordpress, Ajax, Maven, Git, Docker, Rancher, System Analysis and Design

RELEVANT COURSEWORK

- Artificial Intelligence with Prolog, Data Structure and Algorithms, Computer Algorithms and Complexity, Structure Programming C, Object Oriented Programming - C++, Java Programming, Operating Systems, Database Management System, Software Engineering, and System Analysis, Design and Development

PROGRAMMING BACKGROUND

- **Contest Participation:** IUT 4th National ICT Fest - 2012, NSU ACM ICPC Dhaka Site - 2011, SUST Inter-University Programming Contest – 2011, IUT Inter-University Programming Contest – 2011
- Solved over 400 problems from different online judges.
- Participated regularly in online programming contests hosted by online judges such as LightOJ, UVa Online Judge, etc.

VOLUNTARY UNIVERSITY SERVICES

- **Competitive Programming Instructor:** Conducted workshops on problem-solving especially using C and C++ with dedicated sessions on Data Structure and Algorithms
- **Public Relations Officer and Vice-President:** Spent a lot of my time as a committee member of the Leading University Computer Club (LUCC) taking on roles such as Public Relations Officer and Vice-President
- **Security Assurance Agent:** Served as a Security Assurance Agent of the Bangladesh National Cadet Corps (BNCC), Leading University platoon

CONFERENCE PARTICIPATION

- ICBSLP 2019: International Conference on Bangla Speech and Language Processing
- ICBSLP 2018: International Conference on Bangla Speech and Language Processing

TEST SCORE INFORMATION

- **Graduate Record Examinations General Test (GRE):** Overall: 304, (Quantitative-159, Verbal-145, AWA-3.0)
- **International English Language Testing System (IELTS):** Overall: 7.0, (Listening-7.0, Reading-6.0, Writing-6.0, Speaking-8.0)