

Ashraful Islam

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Graduating December 2024 — Available for full-time employment starting January 13, 2025

EDUCATION

University of Alabama at Birmingham

Master of Science in Computer Science, GPA: 3.80/4.00

Alabama, USA

Jan 2022 - Dec 2024

Leading University

Bachelor of Science in Computer Science and Engineering, GPA: 3.30/4.00

Sylhet, Bangladesh

Aug 2009 - Aug 2013

EXPERIENCE

University of Alabama at Birmingham

Graduate Research Assistant

Alabama, USA

Jan 2022 - Aug 2024

- Led a team of three to develop Brouhaha, a Racket-to-C++ compiler, achieving faster compilation times through flow-directed inlining based on control-flow analysis (CFA) and advanced local optimizations. [Github]
- Automated testing infrastructure for Brouhaha by writing Python scripts, improving validation and debugging processes.
- Ensured Brouhaha's cross-platform compatibility using Git for version control, Docker for deployment, and CMake for build configuration on Linux, Windows, and macOS.
- Reviewed over 120 papers on Functional Compilation and Program Analysis, summarizing insights from top journals (POPL, PLDI, ICFP) in a 30-page report. [Link]

Bangla Search Engine (Pipilika)

Software Engineer

Sylhet, Bangladesh

Aug 2017 - Mar 2021

- Enhanced keyword-based search relevancy by 35% through redesigning the Apache Solr schema and implementing advanced query-boosting techniques.
- Developed scalable crawlers and parsers using Python and Java to extract data from over 40,000 websites, boosting indexed data by 18% and enhancing search capabilities.
- Wrote RESTful API using Spring Boot to provide domain-specific time series data, improving reporting capabilities and reducing the debugging time by 20%.
- Implemented TIG (Telegraf, InfluxDB, Grafana) stack for real-time infrastructure monitoring, reducing downtime by 15% through proactive issue detection.

Southeast University

Programmer

Dhaka, Bangladesh

Apr 2015 - Aug 2017

- Developed an Online Admission System using PHP, MySQL, and Bootstrap3, driving 25% of total admissions.
- Reduced report generation time by 30% in the University Support System (USS) through MySQL schema redesign.
- Supervised a vendor in developing a timely Human Resources Management System that met university requirements.
- Served as Interim Manager of the IT department for three months, overseeing daily operations and ensuring smooth continuity of services across all functions.

IT Lab Solutions Ltd

Software Developer

Sylhet, Bangladesh

Sep 2013 - Dec 2014

- Developed web-based shop management software for over 5 businesses using CodeIgniter, MySQL, and Bootstrap3, providing solutions for inventory, sales, and reporting.

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C++, PHP, JavaScript, Racket
- **Database Technologies:** MySQL (RDBMS), MongoDB (NoSQL), Apache Solr (NoSQL)
- **Frameworks & Libraries:** Spring Boot, React, WordPress, CodeIgniter, Bootstrap3, AJAX, jQuery
- **DS & ML Libraries:** NumPy, Pandas, Scikit-learn, SciPy, Matplotlib, Seaborn, TensorFlow, PyTorch
- **Web Technologies:** RESTful APIs, Postman, HTML5, CSS3, JSON, Web Scraping/Crawling (Scrapy, Jsoup)
- **DevOps:** Git, Docker, AWS (S3, EC2, Lambda, SNS), Linux, CI/CD, Maven, Bash, OpenMPI, CMake
- **Project Management & Methodologies:** Agile, Scrum, SDLC, MVC, Unit Testing (Pytest, Junit), JIRA