

MD. AMIT HASAN AROVI

Graduate Research Assistant, The Pennsylvania State University

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Professional Statement

I am a second-year PhD student and a graduate research assistant at Pennsylvania State University, under the supervision of Dr. Ruslan Nikolaev. My research interests are in operating systems, concurrency, and memory management. I am currently working on developing novel techniques and algorithms for efficient and scalable memory management in concurrent systems. I have strong programming skills in C and C++. I am passionate about solving challenging problems and advancing the state-of-the-art in computer science.

Education

- 2022 - Present **PhD student in Computer Science and Engineering**, The Pennsylvania State University, University Park, USA
Specialization: Computer Systems
Research Topic: Developing Scalable Concurrent Algorithms for Enhanced Computing Environments
Supervisor: Dr. Ruslan Nikolaev
- 2011 - 2015 **BSc Computer Science and Engineering**, Islamic University of Technology, Bangladesh
Specialization: Human-Computer Interaction
Thesis Topic: Speech Based Interaction for the Visually Impaired
Supervisor: Dr. Md Kamrul Hasan

Programming / Technical Skills

C#, ASP.NET, C/C++, VB.NET, SQL, React Native, Flutter, Java, JavaScript, IDEs and Text editors, Command line tools

Industrial Experience

Senior Software Engineer

January 2022 – July 2022

Nilavo Technologies Ltd., Bangladesh

Responsibilities: Developing web applications in ASP.NET and C#, as well as debugging and troubleshooting programs; conducting research and development on available technologies for incorporating new features and resolving problems; and performing security audits on existing systems to identify security flaws and apply effective fixes to ensure optimal security.

Software Engineer

January 2019 – December 2021

Nilavo Technologies Ltd., Bangladesh

Junior Software Engineer

December 2015 – December 2018

Nilavo Technologies Ltd., Bangladesh

Software Engineer Intern

November 2014 – December 2014

XeonBD, Bangladesh

Responsibilities: Developing Android applications.

Selected Awards

2015 Winner of Imagine Cup 2015 Bangladesh World Citizenship Competition and World Semi-finalists with project ***Eye Pointer*** ([Eye Pointer](#))

Publications

Khan, N., Arovi, M. A. H., Mahmud, H., Hasan, M. K., & Rubaiyeat, H. A. (2015, December). Speech based text correction tool for the visually impaired. In *2015, 18th International Conference on Computer and Information Technology (ICCIT)* (pp. 150-155), IEEE.

Projects

Anvil EQ™ (Anvil EQ)– Anvil EQ™ is an on-demand equity administration application specifically designed for private companies, their legal advisors, accountants, and investors. The basic application facilitates the seamless management of stock and option schedules. Additional standard and custom modules may be added for more complex tasks, including stock option expensing (ASC Topic 718) for companies and mark-to-market valuations for funds. This project is being developed using **C#, ASP.NET, MSSQL**.

Data Collector – An iOS and Android-based application to collect the image, video, and sensor data for an ML-based crack and defect detection approach for road condition evaluation. Developed using **Dart and Flutter**.
([Data Collector](#))

Eye Pointer – A software for the handicapped with non-working hands to enable them to use computers. Developed using **C#, .NET Framework, Emgu CV, and Visual Studio**. ([Eye Pointer](#))

Pointer Security – A mobile phone application for Android and Windows to ensure the security of computers. It allows users to stream a webcam and monitor the screen of the computer, locking or shutting down the computer. Developed using android/windows Phone 8.1.

Speech-based interaction app for the visually impaired – Using an Android phone as a remote, users can use text editors on computers, listen to music, read E-books, and search files. Developed as a part of the undergraduate thesis and implemented using **Android, Java Swing, and Google Speech**.

Railway Ticket Management System – Web application for processing Railway tickets. Developed using **C#, ASP.NET, MSSQL**.

General Knowledge Enhancer – An Android smartphone application that allows students to develop and enhance their general knowledge of science, math, and international affairs.