

# Touhidul Alam Seyam

## Software Engineer & Research Assistant

### About Me

Innovative Software Engineer and Research Assistant with a strong foundation in Computer Science. Experience in full-stack development, machine learning, and academic research. Passionate about leveraging cutting-edge technologies to solve complex problems and drive advancements in the field of computer science and engineering.

### Contact Information

**Location:** Bangladesh

### Skills & Expertise

#### ★★★★★★ Frontend

React, Svelte, Vue, Tailwind CSS, Bootstrap, Material UI

#### ★★★★★★ Backend

Golang, PHP, Node.js, Deno, Bun, Express, GraphQL, Shopify, Flask

#### ★★★★★ Fullstack

**Fullstack:** TypeScript, Next.js, Nuxt.js, Laravel, Django, WordPress

#### ★★★★ Mobile

**Mobile App:** React Native, Flutter, Expo, NativeWind, Android, iOS

#### ★★★ Database

**Database:** MongoDB, PostgreSQL, SQLite, MySQL, Redis

#### ★★ Cloud

**BaaS:** Firebase, Supabase, Convex, Appwrite

**Cloud:** AWS, Azure, GCP

#### ★ AI

**AI:** TensorFlow, PyTorch, OpenAI API

### Professional Experience

#### Hello World Communications Limited

*Software Engineer 2024-07—Current*

At Hello World Communications Limited, I design and develop scalable web applications, collaborating with cross-functional teams to deliver high-quality software solutions for clients in various industries. My responsibilities include full-stack development, code reviews, and deploying applications to production environments.

#### BGC Trust University IT Club

*Executive Tech Team Member 2024—Current*

#### BGC Trust University Bangladesh

*Research Assistant 2023—Current*

As a Research Assistant at BGC Trust University Bangladesh, I support faculty-led research projects in computer science, focusing on machine learning, data analysis, and academic writing. My work involves conducting experiments, publishing research papers, and mentoring junior students in research methodologies.

#### Self-employed

*Freelance Developer 2021-03—Current*

As an Executive Tech Team Member at BGC Trust University IT Club, I help organize and execute technical workshops, coding competitions, and community outreach programs. My role involves mentoring students, managing event logistics, and promoting technology awareness within the university.

As a Freelance Developer, I have delivered custom web applications and software solutions for clients across different sectors. My freelance work includes requirements gathering, UI/UX design, full-stack development, and ongoing support, ensuring client satisfaction and successful project delivery.

- Organized and led multiple coding workshops and hackathons for university students. 🎉
- Developed and deployed web applications for small businesses and non-profits. 🎉

### Achievements

#### B.Sc. (Hons) in Computer Science & Engineering

🏛️ BGC Trust University Bangladesh

Pursuing a Bachelor of Science (Honors) in Computer Science & Engineering with a focus on software development, machine learning, and research. Actively involved in academic projects, research initiatives, and university tech clubs. Consistently achieving high academic performance and contributing to the university's research output through published papers and conference presentations.

#### H.S.C (Science)

🏛️ Chattogram Cantonment Public College

Chattogram Cantonment Public College — GPA: 4.83 — 2021

#### S.S.C (Science)

🏛️ Gomdandi Pilot Model High School

Gomdandi Pilot Model High School — GPA: 5.00 — 2019

## Research Publications

 Various

### Selected Research Publications:

- Seyam, Touhidul Alam; Jowthi, Chandni Barua; Pathak, Abhijit; "Comparing pre-trained models for efficient leaf disease detection: a study on custom CNN", *Journal of Electrical Systems and Information Technology*, 11(1), 1-26, 2024. SpringerOpen
- Seyam, Touhidul Alam; Pathak, Abhijit; "AgriScan: Next.js powered cross-platform solution for automated plant disease diagnosis and crop health management", *Journal of Electrical Systems and Information Technology*, 11(1), 45, 2024. Springer Berlin Heidelberg Berlin/Heidelberg
- Pathak, Abhijit; Bablu, Ziaul Islam; Limon, Towhidul Haque; Barua, Sowmik; Dey, Piya; Jiba, Mowmita Tajnin; Seyam, Touhidul Alam; "Application of Machine Learning K-Means Clustering and Linear Regression in Determining the Risk Level of Pulmonary Tuberculosis", *2024 IEEE International Conference on Computing, Applications and Systems (COMPAS)*, 1-6, 2024. IEEE
- Pathak, Abhijit; Seyam, Touhidul Alam; Chakraborty, Arnab; Santa, Nurjahan Kamal; Uddin, Eftakar; Mim, Tasmim Akther; "Enhancing Cardiovascular Risk Prediction Using Support Vector Machines and Advanced Machine Learning Algorithms", *2024 IEEE International Conference on Computing, Applications and Systems (COMPAS)*, 1-6, 2024. IEEE
- Hossain, Sazzad; Seyam, Touhidul Alam; Chowdhury, Avijit; Xamidov, Munis; Ghose, Rajib; Pathak, Abhijit; "Fine-tuning LLaMA 2 interference: a comparative study of language implementations for optimal efficiency", *arXiv preprint arXiv:2502.01651*, 2025.
- Avijit Chowdhury, Touhidul Alam Seyam, Moin Uddin Ahmed Babar, Chonchal Khan, Saima Akter; "Efficient Malware Classification Using Multiprocessing and Bag-of-Words Vectorization", *Advances in Networks*, 12(1), 19-28, 2025. Scientific Publishing Group
- Hossain, Sazzad; Seyam, Touhidul Alam; Chowdhury, Avijit; Ghose, Rajib; Rahaman, Arifur; Hadika, Zarin; Pathak, Abhijit; "Enhancing Agricultural Diagnostics: Advanced Training of Pre-Trained CNN Models for Paddy Leaf Disease Detection", *Machine Learning*, 10(1), 1-13, 2025.
- Seyam, Touhidul Alam; Hossain, Md Sazzad; Ghose, Rajib; Nurmamatov, Mekhriddin; Fayzullo, Nazarov; Hadika, Zarin; Pathak, Abhijit; "Next-Generation K-Means Clustering: Mojo-Driven Performance for Big Data", *International Journal*, 14(1), 7-19, 2025.

## Professional Certifications

 Various

### Selected Certifications:

- CS50 for Educators – Harvard University  
A gold-standard course blending pedagogy and programming.
- IBM Applied Data Science with Python – Credly / IBM  
In-depth data science course from an industry leader.
- IEEE Machine Learning Mastery – IEEE Computer Society  
Recognized credential in ML from a respected tech org.
- Redis for Python Developers (RU102PY) – Redis University  
Practical and niche, highly valued for backend and data jobs.
- Google Analytics Certification – Google  
Must-have for digital marketing, product, and data roles.
- Google AI-Powered Shopping Ads Certification – Google  
Cutting-edge intersection of AI and e-commerce.
- IBM Deep Learning with TensorFlow – IBM  
Practical DL experience with one of the top frameworks.
- University of Helsinki Elements of AI – University of Helsinki  
Globally respected AI literacy course.

- Kaggle Intermediate Machine Learning – Kaggle  
Practical ML with hands-on notebooks.
- Kaggle Machine Learning Explainability – Kaggle  
Focused on interpretable AI – a trending area.
- Python Essentials 1 & 2 – Cisco  
Well-structured foundation for Python from a top tech company.
- Saylor Academy CS250: Python for Data Science – Saylor Academy  
Clear bridge between Python and real-world data use.
- IBM Data Visualization with Python – IBM  
Highly applicable skill in data storytelling.
- LinkedIn Career Essentials in GitHub – LinkedIn x GitHub  
GitHub skills are critical in modern dev workflows.
- Hackerrank Problem Solving (Basic + Intermediate) – Hackerrank  
Recognized by employers for logic and coding tests.
- Hackerrank SQL (Basic + Intermediate) – Hackerrank  
Practical SQL test prep, valuable for analyst/data roles.
- InfoSys Programming Fundamentals using Python – Part 1 – InfoSys  
Industry-aligned foundational programming cert.
- IBM Simplifying Data Pipelines with Apache Kafka – IBM  
Kafka is a hot tool in big data and event-driven apps.
- MATLAB Deep Learning – MATLAB  
Niche, yet respected in engineering/data science circles.
- Saylor Academy CS406: Information Security – Saylor Academy  
Cybersecurity is a valuable and growing field.

[Full list and certificates here](#)

<https://github.com/Seyamalam/Certificates/blob/main/README.md>.

## Additional Info

### Hobbies and Interests

- Coding and building open-source projects
- Participating in hackathons and coding competitions
- Reading research papers on machine learning and AI
- Blogging about technology and software development
- Playing chess and strategy games
- Volunteering for tech community events

### Key Achievements

- Published multiple research papers in reputable journals, contributing to advances in machine learning, AI, and healthcare technology.
- Developed and launched several successful web applications and platforms for diverse clients and organizations.
- Secured a position as Research Assistant at BGC Trust University Bangladesh, actively contributing to cutting-edge research initiatives.

### Notable Projects

- [Parishad Barta](#) — One of the fastest and best designed news websites in Bangladesh, featuring a modern UI, robust backend, and seamless user experience.
- [Professor Sazzad](#) — A visually stunning, animated portfolio website for a university professor, showcasing advanced frontend techniques and interactive design.
- [Luxe Retreats](#) — A beautiful, 3D-animated website for a tours company, combining immersive visuals with a user-friendly booking experience.
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- Avijit Chowdhury, Touhidul Alam Seyam, Moin Uddin Ahmed Babar, Chonchal Khan, Saima Akter; "Efficient Malware Classification Using Multiprocessing and Bag-of-Words Vectorization", *Advances in Networks*, 12(1), 19-28, 2025. Scientific Publishing Group
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