

Prottoy Sarker Diganto

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Summary

Computer Science undergraduate with a solid foundation in software development, research, and technology-driven problem solving. Skilled at learning new technologies, adapting to changing requirements, and delivering practical solutions through a combination of technical knowledge, analytical thinking, and collaboration. Committed to continuous improvement and professional growth while contributing to meaningful projects and initiatives.

Education

American International University-Bangladesh
B.Sc. in Computer Science and Engineering
CGPA: 3.83/4.00

Dhaka, Bangladesh
Jan 2023 – Ongoing

Technical Skills

- **Programming Languages:** C++, Java, C#, JavaScript, TypeScript
- **Web Development:** HTML5, CSS3, React.js, Next.js, Node.js, NestJS
- **Database Technologies:** PostgreSQL, MySQL, MsSQL, Prisma ORM
- **Software Testing & QA:** Playwright, Postman, API Testing, Manual Testing, Test Case Design, Bug Tracking, Regression Testing
- **DevOps & Deployment:** Git, GitHub, Docker, Vercel, Render, CI/CD, Cloudinary
- **Data Science & Research:** Machine Learning, Data Analysis, Pandas, NumPy, Scikit-Learn, PyTorch, Statistical Analysis

Projects

Invoice & Expense Management System

2026

Full-Stack Web Application

Next.js, NestJS, PostgreSQL

- Developed a modern financial management platform for invoice generation, expense tracking, and business reporting.
- Built a scalable full-stack architecture using Next.js, NestJS, PostgreSQL, and Prisma ORM.
- Implemented secure authentication, REST APIs, role-based access control, and responsive dashboards.
- Integrated Cloudinary-based image management and an admin dashboard for dynamic content management.

GitHub: github.com/iamskyline49/Invoice-Expense-Management-System

AgriVision Solution

2025

Desktop Application

C#, Windows Forms

- Developed a smart agriculture and plant management solution to support cultivation monitoring and task organization.
- Designed an intuitive desktop interface for managing plant records, schedules, and resource tracking.
- Implemented core modules for data management, user interaction, and productivity optimization.

GitHub: github.com/iamskyline49/AgriVision-Solution

Research Papers

Machine Learning for Macroeconomic Risk Management

2026

Conference Submission (Under Review)

- Developed predictive models using LSTM, Random Forest, and XGBoost to analyze and forecast macroeconomic risks.
- Performed data preprocessing, feature engineering, model evaluation, and explainability analysis using Python.
- Explored machine learning approaches to support data-driven economic decision-making and risk assessment.

Last Minute Learning: Academic Procrastination Among Undergraduate Students

2025

Research Study

- Conducted a quantitative study involving undergraduate students to investigate academic procrastination and self-efficacy.
- Analyzed survey data using descriptive statistics and Pearson correlation in R programming.
- Identified behavioral patterns and produced evidence-based findings to support educational decision-making and student success initiatives.

Extracurricular Activities

AIUB Photography Club

AIUB

Photographer

2023 – 2026

- Participated in events and workshops as a volunteer photographer while working under deadlines.

Sports

Cricketer

2015 – Present

- Represented Dhaka Division North in U14, U16, and U18 tournaments; played in AIUB Premier League (APL).

Interests

Full-Stack Web Development, Software Quality Assurance, Automation Testing, REST API Design, Database Systems, Machine Learning, IoT Systems, System Analysis, Cricket, Photography