



# PROTTOY PAUL

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## SUMMARY

- Software engineering student seeking a backend or full-stack development position leveraging academic knowledge in algorithms and practical web development experience.
- Demonstrated expertise in building full-stack applications, routing systems, and managing e-learning platforms for real-world users.
- Adept at applying deep learning, graph theory, and networking concepts to solve complex engineering challenges and link technical strengths to measurable results.

## WORK EXPERIENCE

Web Administrator, AMC mentor (Remote)	Jan 2024 - Present
<ul style="list-style-type: none"><li>Managed an active online e-learning platform utilizing Tutor LMS to ensure a seamless experience for users purchasing and accessing courses.</li><li>Diagnosed and resolved backend integration issues with the Stripe payment gateway, ensuring uninterrupted revenue flow and system stability.</li></ul>	Mar 2024 - Jan 2025
Junior Project Engineer, VIVEK (Dhaka)	
<ul style="list-style-type: none"><li>Developed and deployed the official website for The Vivek Foundation (<a href="http://thevivekfoundation.org">thevivekfoundation.org</a>) to establish and strengthen the organization's online presence.</li><li>Managed version control and deployment pipelines to ensure a reliable, accessible, and user-friendly platform.</li></ul>	

## EDUCATION

<b>Bachelor of Science in Software Engineering</b>	Aug 2024 - present
Institute of Information Technology, University of Dhaka	
<ul style="list-style-type: none"><li>CGPA: 3.84</li><li>Relevant Courses: Theory of Computing, Computer Networking, Deep Learning &amp; Artificial Neural Networks, Data Structures &amp; Algorithms, Discrete Mathematics</li></ul>	
<b>Higher Secondary Certificate (HSC)</b>	Feb 2021 - Oct 2023
Notre Dame College, Dhaka	
<ul style="list-style-type: none"><li>GPA: 5.00 / 5.00</li></ul>	
<b>Secondary School Certificate (SSC)</b>	Jan 2016 - Nov 2021
Keshabpur Govt Higher Secondary School	
<ul style="list-style-type: none"><li>GPA: 5.00 / 5.00</li></ul>	

## ADDITIONAL INFORMATION

- Civic Involvement & Leadership: Joint General Secretary of the Dhaka University Student Association of Keshabpur (DUSA), actively organizing community events and managing student initiatives.
- Awards & Extracurriculars:
  - Member of the Notre Dame College Volleyball Team (Won two inter-college trophies, 2022)
  - Recognized as "Best Scout" for leadership (2018)
  - Two-time Inter-School Badminton Champion (2017, 2018)
- Interests: Artificial Neural Networks, Representation Learning, and algorithmic optimization.

## PROJECTS

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### **Software Project Lab (SPL) - Multimodal Routing & Algorithm Suite | C & Java Developer (19 Feb 2026)**

- Engineered an advanced algorithm comparison suite for complex optimization problems (Traveling Salesman Problem and 0/1 Knapsack), implementing Exact (Branch & Bound), Heuristic (Ant Colony/Greedy), and custom Hybrid solvers.
- Enhanced computational efficiency by designing a Hybrid mode that leverages heuristic results as an upper bound to significantly accelerate the exact solver.
- Integrated robust crash-proofing and automated UI-switching logic for large dataset inputs (N>22), alongside KML file generation for seamless Google Maps visualization.

### **The Vivek Foundation Website | Web Developer (10 Jan, 2026)**

- Developed and deployed the official website for The Vivek Foundation ([thevivekfoundation.org](http://thevivekfoundation.org)) to establish and strengthen the organization's online presence.
- Managed version control and deployment pipelines to ensure a reliable, accessible, and user-friendly platform.

### **Event Registration Platform | Full-Stack Developer (10 Feb 2025)**

- Developed a fully responsive web application using React/Vite for the frontend and Python/Uvicorn for the backend to handle registrations for an 2021 SSC batch community event.

### **Data Compression Utility | C Programmer (Feb 3, 2026)**

- Implemented Huffman coding in C to efficiently compress and decompress data files.
- Architected the solution with modular programming, separating the tree generation, compression, and decompression logic into highly maintainable, distinct files.

## SKILLS

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- Programming Languages: C, Python, Java.
- Web Technologies & Frameworks: React, Tutor LMS, Stripe Integration.
- Core Engineering Concepts: Algorithms & Data Structures, Graph Theory, Deep Learning, Artificial Neural Networks, Computer Networking.
- Tools & Technologies: Git, GitHub, Java Swing, KML Generation, Modular Architecture.
- Leadership & Soft Skills: Team Leadership, Event Coordination, Complex Problem Solving, Cross-functional Collaboration, Effective Communication.