Ashmi Goyal

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Objective:

Computer Science undergraduate seeking a Summer 2026 software or data-focused internship and entry-level roles. Strong foundation in C++, Python, algorithms, and full-stack development with hands-on academic and project experience.

Education:

University of Houston | Houston, TX

Bachelor of Science in Computer Science | Expected May 2026

Relevant Coursework:

Programming Fundamentals I, II, III - C++, Computer Science and Programming - Python, Algorithms and Data Structure, Automata and Computability, Operating Systems, Computer Networks, Statistics, Data Science, Artificial Intelligence, Programming Languages and Paradigms, Software Engineering

Academic Projects

Data Structures & Algorithms Performance Analyzer (C++)

- Implemented core data structures and benchmarked sorting and searching algorithms using object-oriented C++.
- Analyzed runtime performance across varying input sizes using chrono and validated empirical results with time and space complexity analysis.

OS Process Scheduler & Deadlock Simulator (Python)

- Designed and implemented a CPU scheduling simulator modeling FCFS, SJF, and Round Robin to evaluate turnaround and waiting time tradeoffs.
- Evaluated scheduling performance metrics and implemented deadlock detection using resource allocation and circular wait analysis.

Customer Behavior Analysis Using Machine Learning (Python)

- Analyzed 540,000 e-commerce transactions and engineered customer-level features using pandas and NumPy.
- Performed EDA and applied K-Means clustering with feature scaling; evaluated clusters using Elbow Method and Silhouette Score.

Internship Management System (Full-Stack Web Application)

- Designed and developed a full-stack web application using PHP, MySQL, HTML, CSS, and JavaScript with role-based authentication for students and administrators.
- Implemented secure user registration and login using PHP sessions, password hashing, and prepared SQL statements; built complete CRUD functionality and application tracking with relational database design and UML documentation.

Certifications:

CompTIA ITF+, Microsoft 365 Fundamentals

Skills:

Programming Languages: C++, Python, JavaScript, SQL, R
Web & Backend: HTML, CSS, PHP, MySQL
Data & ML: pandas, NumPy, K-Means Clustering, Exploratory Data Analysis
Tools: Git, Google Colab, MySQL