

SOHAM DUTTA

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Technical Skills

- **Programming Languages:** Python, Java, C, PHP, SQL
- **Core Computer Science:** Data Structures & Algorithms, Object-Oriented Programming, Database Management Systems, Operating Systems
- **Data Analytics & Machine Learning:** Pandas, NumPy, scikit-learn, Matplotlib, Streamlit
- **Computer Vision:** OpenCV, MediaPipe
- **Backend & Databases:** MySQL, MongoDB (Basic), FastAPI (Basic)
- **Cloud:** AWS (EC2, S3, IAM)
- **Version Control:** Git

Professional Experience

Algonive

Jan 2026 - Mar 2026

Data Analytics Intern

Bengaluru, Karnataka

- Developed data analytics projects including a Netflix Recommendation System and Customer Segmentation using Python and SQL.
- Cleaned and preprocessed structured datasets using Pandas and NumPy to prepare data for analysis and model development.
- Performed exploratory data analysis and created visualizations using Matplotlib to identify trends and patterns.
- Developed interactive dashboards using Streamlit to present analytical insights.
- Wrote SQL queries to retrieve, filter, and analyze data from relational databases.

Corizo Edutech Pvt. Ltd.

Mar 2026 - May 2026

Cloud Computing Intern

Gurugram, Haryana

- Built foundational knowledge of cloud computing concepts, including virtualization, deployment models, and cloud service models.
- Worked with AWS services including EC2, S3, and IAM through hands-on exercises and guided projects.
- Learned Linux fundamentals and basic cloud security practices in a cloud computing environment.

Ardent Computech Pvt. Ltd.

Jul 2025 - Aug 2025

Industrial Intern

Kolkata, India

- Learned machine learning fundamentals through guided sessions and practical exercises.
- Collaborated on a team-based Python project, contributing to implementation and development tasks.
- Assisted in preparing technical documentation and reviewing project deliverables.
- Worked in a collaborative software development environment using team-based workflows.

Projects

AuraOS – Gesture-Based Desktop Interaction System

Python, OpenCV, MediaPipe, PyAutoGUI

- Developed a gesture-based desktop interaction system enabling cursor movement, mouse clicking, and touch-like scrolling using real-time hand tracking.
- Implemented gesture recognition to distinguish between cursor movement, click, and scroll actions.
- Designed two-finger scrolling with release detection and inertia to reduce accidental input and improve usability.
- Structured the application into separate modules for gesture detection, gesture processing, and operating system interaction.

Virtual Mouse

Python, OpenCV, MediaPipe

- Developed a real-time computer vision application to control mouse movement using hand gestures.
- Built gesture detection and hand-tracking algorithms using OpenCV and MediaPipe
- Translated camera coordinates to screen coordinates, improving cursor accuracy and responsiveness
- Optimized gesture recognition logic to reduce latency and false activations by ~20%
- Independently handled system design, implementation, testing, and debugging

CropConnect – Backend & Database Contribution

PHP, MySQL, SQL

- Developed backend modules using PHP with a focus on server-side logic.
- Designed relational database schemas and wrote optimized SQL queries using MySQL.
- Assisted with frontend integration to ensure smooth communication between application layers.

Education

St. Thomas College of Engineering and Technology, West Bengal

2027

Bachelor of Technology (B. Tech), Computer Science

West Bengal, India