# Shouvik Majumder

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# EDUCATION

# The Pennsylvania State University

Aug 2022 – May 2026

Bachelor of Science in Computer Science

University Park, PA

Relevant Coursework: Programming and Computation I - II, Object Oriented Programming, Intro to Systems Programming, Computer Engineering and Digital Design: Theory and Practice, Calculus I - III, Linear Algebra, Discrete Mathematics, Data Structures and Algorithms, Computer Organization And Design

#### Technical Skills

Programming: Python, Java, JavaScript, C, R, HTML, CSS, Node, is, Express, is, React, is, Verilog Tools: Visual Studio Code, Netbeans, QT Designer, Jupyter Notebooks, Git, Linux/Unix, Unity, Vivado

#### Work Experience

# Software Engineer Intern

June 2025 – Aug 2025

Lockheed Martin

King of Prussia, PA

• Incoming Software Engineer Intern at Lockheed Martin in the Rotary and Mission Systems division

# Teaching Assistant

Aug 2024 – Present

The Pennsylvania State University

University Park, PA

- Grading assignments, quizzes, and exams for a Linear Algebra (MATH 220) course with 100+ students
- Providing feedback on 600+ weekly student submissions, enhancing clarity and understanding of course material

### Software Engineer Intern

May 2024 – Aug 2024

The Pennsylvania State University

University Park, PA

- Developed a **Python** application using **QT Designer**, **obspy**, and **daspy** data structures to process and visualize data from 2,000+ fiber optic sensor channels, aiding geophysicists in analyzing seismic events
- Implemented a frequency analysis feature that generates 3 critical graphs, displaying raw data, dominating and average frequencies across all channels, enhancing data interpretation process for geophysicists
- Integrated a Bandpass filter option within the interface to isolate and analyze specific signals, resulting in a 25% increase in the precision of geohazard readings

#### Statistical Programming Intern

June 2024 – Aug 2024

The Pennsylvania State University

University Park, PA

- Utilized R to import, clean, and analyze survey data from 200+ physicians and 50+ medical students on the AI in Clinical Workflow project to assess the impact of AI on the medical field
- Generated 40+ statistical reports from the cleaned data, contributing to the project's comprehensive analysis of AIs' influence on clinical practices
- Increased data processing efficiency by 30% through automating data cleaning tasks using R, dplyr, and tidyr

### Projects

#### Movie Recommendation System | Python, Scikit-learn, Pandas, JupyterLab

• Developed a movie recommendation system in JupyterLab using Python (Pandas, Scikit-learn) to manage an IMDB dataset of 500+ movies, utilizing TF-IDF vectorization for natural language processing

#### AI Image Generation App | MongoDB, Express.js, React.js, Node.js

• Developed a full-stack AI Image Generation App using the MERN stack (MongoDB, Express.js, React.js, Node.js) with 20+ modular React components, integrating OpenAIs DALL-E model to generate high-quality images based on dynamic user input

#### Extracurricular Activities

## Research Assistant

May 2024 – Present

The Pennsylvania State University

- University Park, PA • Conducting literature searches on 1000+ articles using 3 scholarly databases (PubMed, Web of Science, and
- SSRN) to retrieve and archive articles related to biotechnology, aiding in the research team's analysis • Enhancing data reliability by verifying 170+ findings through cross-referencing multiple sources, ensuring the reliability of the collected data for ongoing research