Email: anubhav.4.sen@gmail.com
Home Address: Norristown, PA

ANUBHAV SEN

GitHub:
https://github.com/asen4

Personal Website:
https://asen4.github.io

EDUCATION

Bachelor of Science in Computer Engineering
The Pennsylvania State University, University Park, PA — Graduation: May 2026
College of Engineering | Schreyer Honors College — Cumulative GPA: **3.93/4.0**

TECHNICAL SKILLS

- Proficient: Java, Python, Dash, Android SDK, Android Studio, Google Firebase, XML, Verilog
- Intermediate: C, SQL, Git, JavaScript, NodeJS, MongoDB, React Native, Shiny

WORK EXPERIENCE

Global Data Operations Intern @ Merck & Co. — **June 2024 – August 2024**

- Developed a streamlined, user-friendly dashboard to centralize clinical data automation tools, significantly improving accessibility and usability while **reducing workflow time by 30%** for **over 500 users globally**.
- Created a one-click interface for running these tools, gaining strong support from non-technical users and eliminating the need for any prior programming experience (especially with using the command-line interface).
- Incorporated Dash framework and collaborated with IT to secure access for deploying the site on AWS servers.

Computer Science Grader & Learning Assistant (LA) — **January 2023 – August 2025**

- Coached **300+ students** on data structures + algorithms (e.g., complexity analysis, graph theory, DP, LP, etc.).
- Facilitated 2 recitations weekly and providing 1:1 tutoring during office hours to help students debug their code.

SOFTWARE DEVELOPMENT PROJECTS

React Native Development — **May 2023 – Present**

- ***Nittany Retails***: e-commerce (JavaScript-based) mobile application — **August 2023**
  - Hosted NodeJS backend server and connected it to MongoDB database to store user data effectively.
  - Incorporated Stripe API to handle payment processing in order to generate internal revenue within app.

Android Application Development — **August 2019 – Present**

- Published **3 Android (Java-based) mobile applications** to Google Play Store that have a growing user base – currently exploring how to increase user engagement and improve feature development.
- ***Smart Planner***: digital student planner application — **July 2022**
  - Implemented scheduling, task reminders, and calendar syncing features to help students manage coursework and deadlines effectively by integrating the Alarm Manager API and Google Calendar API.
- ***TalkZone***: video-calling/casting media application — **October 2021**
  - Integrated the Jitsi Meet SDK (an external messaging and video conferencing software) to initiate calls and the Google Cast SDK to seamlessly transmit audio and video from the handheld device to the TV.
- ***TagOut!***: social media application — **July 2021**
  - Developed key features such as phone number authentication w/ Firebase Authentication, dynamic user feeds and real-time messaging w/ Firebase Realtime Database, and file sharing w/ Firebase Storage.

Video Game Development — **August 2018 – August 2019**

- Built clones of classical arcade games like *Angry Birds*, *Flappy Bird*, *Snake*, and *Tetris* using Pygame.

RESEARCH EXPERIENCE

Improving circRNA Detection: A Study of Paired-End Read Patterns — **February 2025 – Present**

- Implementing an algorithm that accurately detects circular RNAs (circRNAs) by identifying outward-facing read pairs in RNA sequencing (RNA-Seq) data, addressing gaps in existing tools that rely solely on chimeric reads.

Theory and A Heuristic for the Minimum Path Flow Decomposition Problem — **July 2023 – January 2025**

- Investigated decomposition of a directed cyclic graph such as to minimize the number of path sets between all sink and source nodes; applied theories from a working model available on DAGs from my professor's research.

AI for Politics — **November 2022 – May 2024**

- Predicted future US election results by scraping **10K/day** political tweets using X API, separately classified each one based on political leaning with NLP methods, and created a heat map of country to visualize results.

LEADERSHIP/ACTIVITES

AlgoPSU Director — **January 2023 – Present**

- Mentor **25 students** on abstract data structures and walk through LeetCode questions to reinforce concepts.

Java: A Comprehensive Guide (Parts I & II) — **October 2021 – August 2022**

- Authored and published a two-part written guide to the fundamentals and advanced theories of Java; only available on Amazon as Kindle eBook, hardcover, and paperback.